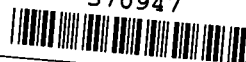


INTERIM
REMEDIAL INVESTIGATION REPORT
SYOSSET LANDFILL
SYOSSET, NEW YORK

August 1989

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370947



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EXECUTIVE SUMMARY

Geraghty & Miller, Inc. was retained by Lockwood, Kessler & Bartlett, Inc. under contract to the Town of Oyster Bay to participate in a Remedial Investigation/Feasibility Study (RI/FS) for the Syosset municipal landfill site. This report constitutes the Interim RI which consists of three distinct studies: the On-Site Ground-Water Study, the Landfill Dimension Study, and the Subsurface Gas Study. The Interim RI was developed to characterize potential on-site contamination and evaluate the potential off-site migration pathways.

Field work for the RI was begun in April 1987 and completed in June 1988; landfill gas and water levels continue to be monitored on a monthly basis. The overall scope of work for the Interim RI consisted of the following field activities:

- Installation of nine ground-water monitoring wells to supplement six existing ground-water monitoring wells.
- Installation of 19 gas monitoring wells.
- Drilling of four borings through the fill.
- Collection of fill samples.
- Collection of ground-water samples.
- Collection of landfill gas samples.
- Pressure testing of gas monitoring wells.
- Monthly monitoring of landfill gas and ground-water levels.

In 1933, and continuing to 1967, the Syosset Landfill began accepting the following types of waste: commercial, industrial, residential, demolition, agricultural, sludge, and ash. After 1967, the site accepted only industrial and scavenger cesspool waste until the site closed in 1975. This information is given in the ERM Northeast Report (1983) which provides the only available data on waste characterization at the site.

The Syosset Landfill is underlain by more than 1,000 ft of unconsolidated deposits of sand, silt, gravel, and clay, which rest unconformably on Precambrian bedrock. The unconsolidated deposits consist of, in descending sequence, the Upper Glacial Formation, the Magothy Formation, and the Raritan Formation. At the Syosset Landfill site, the Magothy aquifer is the most significant in terms of potential contaminant migration by a ground-water route. The Upper Glacial Formation is not saturated beneath the site; the Lloyd Sand Member of the Raritan Formation is separated from the Magothy aquifer by the Raritan Clay

(approximately 160 ft in thickness) and lies at too great a depth to be considered as a potential contaminant migration pathway.

Water-level measurements have been collected on a regular basis in both on-site monitoring wells (installed under the direction of ERM and Geraghty & Miller) and off-site monitoring wells (installed by Nassau County). These data have been used to prepare potentiometric surface maps depicting the horizontal direction of ground-water flow. Maps representing on-site and regional horizontal ground-water flow conditions have been prepared. These maps indicate that the dominant horizontal component of ground-water flow is in a northeasterly direction in the Magothy aquifer in the vicinity of the site, and the regional ground-water divide is located south of the site. A comparison of the horizontal and vertical hydraulic gradients indicates that the vertical component of ground-water flow is more pronounced than the horizontal component, thus, indicating that the site is in a deep-flow recharge zone.

Ground-water quality underneath and downgradient of the landfill has been impacted by leachate as evidenced by indicator parameters (chloride, ammonia, alkalinity, hardness, total dissolved solids, specific conductance, iron, and ammonia). The concentrations and distribution of leachate indicator parameters suggest the existence of an off-site plume of leachate-impacted ground water. Volatile organic compounds (VOCs) were detected in some ground-water monitoring wells, however, the concentrations were within a range detected in monitoring wells screened at similar depths in the Magothy Formation in other areas of Nassau County. Further, the distribution of VOCs was not consistent with a contiguous body (plume) of ground-water contamination with the landfill as a source.

The extent and thickness of the landfill were found to be consistent with previous studies. The landfill consists of approximately 35 acres and appears to be divided into two lobes with the deepest lobe located in the western part of the site (with a maximum thickness of 91 ft), and the other lobe near the eastern part of the site (with a maximum thickness of 58 ft). Detectable concentrations of VOCs, base/neutral extractable compounds, and polychlorinated biphenyls (PCBs), and metals were found in some samples of fill in a distribution indicative of random disposition of industrial, commercial, and residential waste.

Concentrations of landfill gas have consistently been highest in gas monitoring wells located along the long axis of the landfill and in the southwestern corner of the site, and lower in wells located along the northern, eastern, and southern boundaries of the site (frequently,

concentrations of landfill gas were undetectable, or nearly so, at these boundary areas). Landfill gases do not appear to be migrating vertically upwards under significant (detectable) pressure and appear to be limited in horizontal extent. VOCs were detected in samples of landfill gas, but not in consistent concentrations or distributions.

REMEDIAL INVESTIGATION REPORT
SYOSSET LANDFILL
SYOSSET, NEW YORK

1.0 INTRODUCTION

Geraghty & Miller, Inc. was retained by the firm of Lockwood, Kessler & Bartlett, Inc. (LKB) under contract to the Town of Oyster Bay to participate in a Remedial Investigation/Feasibility Study (RI/FS) for the Syosset municipal landfill site. LKB provided overall project management and will continue to provide engineering expertise necessary to complete the RI/FS process. This document constitutes the Interim RI Report. The RI was performed in accordance with the protocols and methodologies detailed in the Site Operations Plan (SOP, August 1986), which was approved by the U.S. Environmental Protection Agency (USEPA). The SOP was developed and prepared in accordance with the work plan for the Interim RI to ensure that the RI would be completed in a manner consistent with the National Contingency Plan (NCP).

The RI was conducted to complete data gaps from previous investigations (Table 1) in relation to the hydrogeology, water quality, and potential subsurface gas migration in order to determine the extent of on-site environmental impacts and the potential need for an off-site investigation. The previous investigations referred to in Table 1 were performed by various agencies and/or consultants to address specific issues associated with the site. The ERM-Northeast (ERM) report (1983) was the principal source of background data used to develop the RI work plan and the SOP. The monitoring wells installed during the ERM study were judged to be suitable for water-level and water-quality monitoring purposes based on observations made in the field and the drilling methodologies described in the ERM report. Therefore, these wells were used as monitoring points during the Interim RI. Further, the water-quality data from the ERM report were subjected to the verification process as described in the SOP, and these data were used to develop the RI work plan as described above.

2.0 SITE DESCRIPTION AND HISTORY

The Syosset Landfill is located in central Nassau County in the Town of Oyster Bay, Syosset, New York. The site is roughly rectangular in shape and encompasses approximately 35 acres. The offices and facilities of the Town of Oyster Bay Department of Public Works (TOB-DPW) are located adjacent (east) to the landfill and occupy approximately 18 acres; to-

gether the landfill and the adjacent facilities total approximately 53 acres. Currently the Town of Oyster Bay (TOB) controls access to the site which is fenced in. Topographically, the site is relatively flat and at similar elevation to the surrounding area. The site is characterized by basically a barren landscape with some clumps of trees. This is discussed in greater detail in Section 2.5. As illustrated in Figure 1, the site is bounded by the Long Island Expressway and Miller Road to the southeast, Cerro Wire & Cable Corporation to the southwest, and the Long Island Railroad to the northwest. A residential area and the South Grove Elementary School border the site to the northeast. The entire landfill area is enclosed by a 6-ft high cyclone fence.

There are two recharge basins owned by Nassau County which border the site to the northeast and north and are illustrated on figures provided in the Interim RI report. Nassau County recharge basin RB-284 (0.63 acres) borders the site to the northeast and Nassau County storm-water basin SWB-571 (0.23 acres) borders the site to the north. Both basins collect storm water runoff from the neighboring residential area where the water either evaporates or recharges to the underlying Magothy aquifer.

2.1 Well Inventory

During the Interim RI, a well inventory was performed to determine the locations of public supply wells (pumping and nonpumping) within a 3-mile radius of the site. Industrial wells were also included in the inventory for the area within a 1-mile radius of the site. The 1 mile distance was selected for industrial wells to account for major withdrawals that may affect ground-water flow patterns in the vicinity of the site. The 3-mile distance was selected for public supply wells to ensure all wells being used for consumptive purposes were accounted for within a distance beyond that which could be impacted by a potential leachate plume.

Data collected for this survey were obtained from well records and maps at the New York State Department of Environmental Conservation (NYSDEC) offices in Stony Brook, New York. A summary of data for the public supply and industrial wells is provided in Tables 2 and 3, respectively, and the locations of these wells are shown on Figure 2. The pumpage data (1986), reported in Tables 2 and 3, were the most recent data available in the NYSDEC files. Data on domestic or other users of ground water in the vicinity of the site are not provided because they do not exist; the entire area is serviced by local water districts (Jericho, Hicksville, and Plainview).

2.1.1 Public Supply Wells

As can be seen in Figure 2, although there are four public supply wells within a 1-mile radius of the site (Wells N4133, N4246, N6190, and N6191), none of these wells are currently in service (Table 2). Well N4133 was sealed in 1982 reportedly as a result of odor problems.

According to the Jericho Water District, Well N4246 was disconnected from the water supply system and will likely be sealed as a result of the recent detection of volatile organic compounds (VOCs) in this well (Edwards, pers. comm. 1988). With respect to volatile organic compounds (VOCs) detected in the public supply well N4246, it is unlikely that this well has been impacted by the landfill. This well is located approximately 0.5 miles west of the site, thus conditions at this location are not consistent with conditions at the landfill, given the conclusions presented in this report. According to a representative of the Hicksville water district (Woodwell, pers. comm. 1988), Wells N6190 and N6191 are used only during periods of peak demand, although, as indicated in Table 2, there was no reported pumpage from these wells in 1986.

As seen in Figure 2, there are eight public supply wells (excluding Well N4133) located within 3 miles of the site in the general direction of ground-water flow (northeast)(see Section 4.1.1). The closest of these public supply wells (Wells N198 and N199) are located approximately 2 miles to the northeast. These two wells are screened in a deeper part of the Magothy aquifer (540 to 620 ft below land surface) and are still in service, according to the Jericho Water District (Edwards, pers. comm. 1988).

Public Supply Well N570, the next closest well, is located approximately 0.4 miles northeast of Well N198 and N199. The remaining five public supply wells, located in the northeast quadrant of the map, are either approximately 3 miles from the site and/or are due north or east of the site.

2.1.2 Industrial Wells

According to data obtained from the NYSDEC files, 14 industrial wells (pumping more than 45 gallons per minute [gpm]) are located within 1 mile of the site. The locations of these wells are shown on Figure 2. These wells are screened in the Magothy aquifer at depths ranging from 120 to 440 ft below land surface and are reportedly used for general industrial, air conditioning, or fire protection purposes. Only one of the 14 industrial wells (Well N3838)

is reportedly used for domestic purposes. This well is not located downgradient of the site; rather it is located approximately 0.2 miles west (upgradient) of the landfill. Only three of these wells have withdrawals reported to the NYSDEC in 1986. All owners of private wells are required to report their total pumpage on an annual basis for each well with a flow rate greater than 45 gpm. Two of the wells (N3569 and N6741) with pumpage reported to the NYSDEC are located on Cerro Wire & Cable Corporation's (Cerro) property, adjacent to the site, and are reportedly used for industrial purposes. In 1986, the withdrawal of ground water from Wells N3569 and N6741 was 53 and 115 million gallons, respectively; however, these two wells apparently are no longer in service since Cerro reportedly closed for business in the latter part of 1986. A third well, owned by Reckson Associates (N9842), reported 85 million gallons withdrawn from the Magothy aquifer in 1986; this well is located approximately 0.4 miles northwest of the site.

2.2 Waste Disposal

The Syosset Landfill reportedly began practicing refuse disposal in 1933 and continued until 1967. The only data available on waste characterization are provided in the ERM Northeast Report (1983). According to this report, the waste types accepted included the following: commercial, industrial, residential, demolition, agricultural, sludge, and ash. From 1967 until its close in 1975, the site accepted only scavenger cesspool waste, which was processed at the treatment facility located near the defunct incinerator building, and industrial waste.

Interviews with sanitation department personnel who were involved with the site's daily activities during its period of operation, and a review of aerial photographs of the site have been the sole sources of information on landfill practices. The site was excavated into two cells to depths of approximately 60 to 90 ft below land surface (see Sections 3.2 and 4.3). Segregation of wastes appears to have been limited to scavenger cesspool waste which was treated at the facility mentioned above, and tires which were disposed of along the fence in the vicinity of Well SY-4, as indicated by aerial photographs. Buried combustible fill materials were reportedly ignited and allowed to burn in portions of the landfill.

2.3 Climatology

Long Island has a modified continental climate, resulting from the combined influence of prevailing westerly winds and the proximity to the Atlantic Ocean. Most weather conditions

approach from the continental land mass from the west because of prevailing westerly winds. The climate is relatively humid, with air temperature extremes modified by the Atlantic Ocean and, to a lesser extent, by Long Island Sound. Graphs of air temperature in Garden City, New York, located approximately 8 miles from the study area, indicate that the lowest mean monthly air temperature is 31.4°F (January), and the highest is 74.9°F (July) (Isbister 1966).

The highest temperature recorded at LaGuardia Airport in northern Nassau County was 107°F in July 1966 and the lowest temperature was -3°F in January 1985. Average monthly wind speeds vary from 10.4 miles per hour (mph) in July and August to 14.1 mph in March with the wind speed averaging 12.3 mph for the year. The average wind direction is from the northwest or west-northwest from November through April and from the south from June through September. The average wind direction in March is from the northeast and in October from the southwest with an average wind direction from the south for the year (National Oceanic and Atmospheric Administration 1988).

2.3.1 Precipitation

Precipitation in Nassau County averages 42 inches per year, as determined from 30 years of records collected by the National Weather Service. The annual precipitation recorded in Manhasset, New York from 1938 to 1978 reached a maximum of 64.70 inches in 1975 and a minimum of 22.73 inches in 1965; the long-term average annual precipitation from 1938 to 1978 is 41.95 inches. Mean monthly precipitation in Manhasset ranges from a low of 2.68 inches in June to a high of 4.09 inches in August (Kilburn & Krulik 1987). At LaGuardia Airport, there is an average of 20 to 25 thunderstorms per year (National Oceanic and Atmospheric Administration 1988).

2.3.2 Evapotranspiration

Evapotranspiration (evaporation and transpiration) in the Upton, New York area of Suffolk County ranges from 15 inches per year in areas where vegetation is thin to approximately 30 inches per year near streams and swamps. In this study area, the average annual evapotranspiration ranges from 22 to 26 inches per year (Isbister 1966).

2.3.3 Recharge

The water-table aquifer (Magothy) is recharged by precipitation which moves downward through the unsaturated zone until it reaches the water table. Precipitation at the site averages 42 inches per year, but as discussed earlier in this report, approximately one-half is lost by evapotranspiration. At the site runoff is considered negligible due to the relatively flat topography, the permeable surface conditions (sparse vegetation and sandy soil), and the absence of surface drainage (ditches, streams, etc.) (Isbister 1966). The remaining precipitation recharges the ground-water reservoir.

No permanent surface-water bodies exist on-site except for a small, isolated, shallow body of water southeast of the defunct incinerator building which mainly drains adjacent pavement and on-site roadways. Given the size of this pond, the area being drained, and the depth to ground water (greater than 100 ft), it would not be possible to isolate the potential impact of this pond from the overall impact of the landfill. This contention is supported by hydrogeologic and water-quality data in the Interim RI report. Drainage for the rest of the site is accomplished mainly by infiltration of precipitation into the subsurface. In the event overland flow (runoff) occurs, this water would only be in contact with the clean cover soil at the site and drained to the recharge basins located north and northeast of the site.

Infiltration rates of ground water are relatively high at the site, which is situated on an outwash plain where loamy soil is underlain by permeable sand and gravel deposits. A few miles north of the site is the Ronkonkoma terminal moraine where infiltration is impeded by extensive deposits of clay and till near the surface.

Infiltration and recharge vary considerably according to the season. Although precipitation is relatively evenly distributed throughout the year, net recharge is highest during winter and early spring when plant activity is at a minimum. During the summer and fall, growing plants utilize most of the precipitation and little, if any, recharge occurs. Runoff is probably also higher in the winter during the relatively brief periods when the ground is frozen (Isbister 1966).

The site is situated in an area defined by the Federal Emergency Management Agency as Zone C, an area of minimal flooding.

2.4 Soils and Vadose Zone

The native soils at the site were removed during its use as a sand and gravel pit. After its use as a landfill, the site was covered with a nearly flat layer of clean, sandy fill which forms the surface soil. This layer is recognized by the soil survey of Nassau County as being an Udorthent soil which consists of deep, excessively drained acid soils typically used at sanitary landfills. Usually, the surface is capped with a loamy veneer to encourage plant growth for stabilization. Udorthent soils are generally loose to firm, yellowish brown or pale brown loamy sand or sand.

2.5 Ecology

The site is located in a highly developed residential and industrial area which is not known to contain ecologically significant habitat. Surrounding land uses include industrial and commercial facilities to the south and west, Town of Oyster Bay Highway Yard to the east, and single-family homes to the north.

Most of the site is completely barren and with the remaining area consisting of sparse to moderately dense groupings of various hardwood trees, shrubs, and ground cover. Dominating tree species appear to be Black Locusts (4- to 8-inch diameter), Common Elder (2- to 6-inch diameter), and Chokecherry (2- to 6-inch diameter). Several varieties of broadleaf weeds, ivy, hawthorns, sumac, and various grasses make up the sparse understory along the perimeter of the property. There was no evidence of significant or protected plant species on or adjacent to the property.

There are no wetlands on or adjacent to the site. However, a low area that is on the northerly side of the site supports the growth of Giant Reed, a common freshwater wetland species. The occurrence of this species is most likely due to the infrequent ponding caused during storm conditions.

The site offers minimal wildlife habitat and does not represent a significant environment. Since residential communities and commercial businesses surround the site, species that are sensitive to human activities, such as the red fox, are not common to this location. A variety of small mammals, such as the cotton-tail rabbit, gray squirrel, rats and mice, field birds and song birds are common inhabitants. Endangered or threatened wildlife

species are not known to inhabit the subject site. The site does not contain habitat such as streams, ponds, or wetlands that might attract migratory bird species.

2.6 Geology

The Syosset Landfill is located on Long Island, New York within the glaciated part of the Atlantic Coastal Plain physiographic province. Hydrogeologic investigations on Long Island and within the vicinity of the Town of Oyster Bay have been conducted by the United States Geological Survey (USGS) (Isbister 1966; Franke and Cohen 1972). These studies generally agree on the geologic description of the deposits underlying the site. The Syosset Landfill is underlain by more than 1,000 ft of unconsolidated deposits of sand, silt, gravel, and clay which rest unconformably on the bedrock surface. The bedrock is Precambrian in age and consists of crystalline metamorphic and igneous rock (schist, gneiss, and granite). The bedrock surface has a fairly constant slope of approximately 80 ft per mile (1.5 percent) and dips in a southeasterly direction (Isbister 1966). The unconsolidated deposits overlying the bedrock surface have an even gentler slope of 60 ft per mile (Isbister 1966).

The bedrock surface is directly overlain by Late Cretaceous deposits known as the Raritan Formation, which consists of two units or members: the Lloyd Sand Member (Lloyd aquifer) and the clay member (Raritan Clay). Beneath the site, the Lloyd Sand is approximately 240 ft thick and rests unconformably on the bedrock surface; the Raritan Clay is a major regional confining unit which is approximately 160 ft thick and overlies the Lloyd Sand (Isbister 1966).

The Magothy Formation, which is also a late Cretaceous deposit, lies unconformably on the Raritan Formation (i.e., Raritan Clay) and is approximately 540 ft thick beneath the site. The Magothy is a regional formation occurring throughout most of Long Island, except locally near the North Shore where erosion has removed parts or all traces of the Magothy and/or Raritan.

The deposits of the Magothy Formation, which are characterized by their light color and fine-grained texture, consist chiefly of interbedded lenses of sand, sandy clay, with varying amounts of silt. The primary mineral of the sandy beds is quartz (angular to subangular) with varying amounts of clay minerals, chert, muscovite, and a small percentage of dark, heavy minerals such as lignite and pyrite. Iron oxide is also found locally abundant.

Although a general value of porosity is frequently assumed to be 30 percent by investigators, Isbister (1966) reports laboratory results from 32 to 41 percent.

Directly above the Magothy Formation lies the Pleistocene outwash deposits known as the Upper Glacial Formation (Upper Glacial aquifer); these deposits are characterized chiefly by stratified coarse sand and gravel. The surface of the Upper Glacial Formation on which the site is situated is known as outwash plain.

2.7 Regional Hydrogeology

Of the three unconsolidated geologic formations underlying the site (Upper Glacial, Magothy, and Raritan), only two are saturated: the Magothy Formation and the Raritan Formation. The Upper Glacial Formation is completely unsaturated in the vicinity of the site. The saturated portion of the Magothy Formation (Magothy aquifer) is the principal source of water for public and industrial use, therefore, most of the hydrogeological discussion will focus on this aquifer. The Lloyd Sand Member of the Raritan Formation is completely saturated (Lloyd aquifer) and is separated (confined) from the Magothy by the Raritan Clay (also saturated), which is a regional aquitard that is approximately 160 ft thick (see Section 2.6). Thus, although the Lloyd aquifer is used for water supply, this aquifer was not investigated because of its depth (approximately 760 ft beneath the site) and the presence of the Raritan Clay (160 ft thick).

2.7.1 Upper Glacial Formation

The Upper Glacial Formation is primarily composed of coarse sand and gravel deposited during the Pleistocene age, which ended approximately 15,000 years ago. These deposits were largely removed from the site due to the excavation (sand and gravel mining) of this material and subsequent filling during its use as a municipal landfill (1933 to 1975). A detailed discussion of the extent of the landfilling is presented in Section 3.2 (Landfill Dimension Study).

Prior to the mining of the sand and gravel deposits, the Upper Glacial Formation was approximately 60 to 100 ft in depth under the site. Unexcavated portions of this formation are found toward the boundaries of the site and beneath the landfill. The permeability of this formation is generally greater than the Magothy, and it serves as the principal source of precipitation recharge to the Magothy. In areas located in the vicinity of (but beyond) the lim-

its of the site where the Upper Glacial Formation is partially saturated, it is known as the Upper Glacial aquifer. The Upper Glacial aquifer and the underlying Magothy aquifer, are generally considered to be a single hydrogeologic unit as they are directly connected hydraulically (i.e., there is no continuous confining unit [aquitard] between the two aquifers).

2.7.2 Magothy Aquifer

The saturated portion of the Magothy Formation (Magothy aquifer) extends from the water-table surface (which occurs at approximately 100 to 115 ft below land surface) to the Raritan Clay. As stated previously, the Magothy aquifer is composed of fine-grained sediments: Interbedded sequences of sand with sandy clay, silt, and clay are prevalent through the unit. In the study area, the Magothy is directly (hydraulically) connected to the overlying Upper Glacial Formation area as no continuous confining beds (aquitards) are present. The Magothy aquifer is separated from the Lloyd aquifer by the Raritan Clay, a regional, continuous aquitard, which limits the ground-water flow between the two ground-water systems.

As a result of the heterogeneous nature of the Magothy aquifer, the water-transmitting properties can vary widely. Although the horizontal hydraulic conductivity in the Magothy aquifer in the vicinity of the site is reported to be approximately 400 gallons per day per square foot (gpd/ft²) (McClymonds and Franke 1972), considerable variation is known to occur throughout this formation.

3.0 METHODOLOGY

In this section, the methodologies employed for the tasks in the Interim RI are reviewed. These methods were described in detail in the SOP. Deviations or changes from the SOP protocols are discussed in the appropriate sections.

3.1 On-Site Ground-Water Study

The On-Site Ground-Water Investigation was designed to expand the existing on-site monitoring well network. This network consisted of seven shallow monitoring wells installed during a previous ground-water investigation by ERM (1983) during which leachate impacts to ground water beneath the site had been identified. As discussed in Section 1.0, the on-site wells previously installed under the supervision of ERM were judged to be suitable for

monitoring purposes, despite the fact that these wells are not ideally constructed. Specifically, the seals are placed at a relatively high position with respect to the screen zones and the material filling the annular space between the seals and the screens appears to be formation collapse. Although, because it is disturbed, this material is likely to be slightly more permeable than the surrounding formation, water samples drawn from these wells would most likely be drawn primarily from the screened intervals, thus, making these water samples reasonably representative of the water quality from the respective screened zones.

The purpose of the On-Site Ground-Water Investigation was to characterize the previously reported impacts to the ground-water quality on-site, and to assess the potential for off-site migration of impacted ground water. The scope of work for the On-Site Ground-Water Investigation included drilling and installing seven additional monitoring wells, collecting soil samples for laboratory analyses, geophysical logging of the well borings, collecting ground-water samples for laboratory analyses, and monitoring water levels in the on-site wells. It should be noted that one of the seven wells installed during the ERM investigation (SY-2) was abandoned and replaced by Well SY-2R, which was installed during the On-Site Ground-Water Study at approximately the same location.

3.1.1 Installation of Monitoring Wells

Seven monitoring wells (three shallow, four deep) were installed at the site from December 2, 1987 to March 7, 1988, by Hydrogroup, Inc. under the direction of a Geraghty & Miller hydrogeologist. As discussed in the previous section, one of these wells (SY-2R) replaced one of the seven wells (SY-2) installed during the ERM investigation. The three shallow monitoring wells were installed at similar depths (approximately 140 ft below land surface) to the wells installed during the ERM (1983) investigation. Slight variations in the depths of the shallow wells are a reflection of lithologic changes in the vicinity of the screen zone and/or variation in the depth of the water table (110 to 120 ft below land surface). The four deep wells were installed at a depth of approximately 200 ft below land surface.

A study of aerial photographs of the Syosset Landfill was conducted by Lockwood, Kessler & Bartlett to identify "hot spots" to help select monitoring well locations. The locations of these seven monitoring wells are shown on Figure 3A.

3.1.1.1 Drilling Method

As specified in the SOP, the mud-rotary well drilling method was used to install the monitoring wells at the site. However, during the drilling program, it became necessary to install temporary surface casing through the permeable fill materials and/or coarse native formational deposits (at depths ranging from 60 to 100 ft below land surface) to minimize the loss of drilling fluid in all of the well borings. After the permeable fill or formation materials had been penetrated, drilling proceeded in the prescribed fashion.

Samples of the fill and formational materials were collected with a 2-inch diameter, split-spoon core barrel from 10-ft intervals in all the well borings; however, there was at times no sample recovery obtained in the upper zones of Well Borings SY-1D, SY-3D, and SY-8. Although the SOP specified that samples be collected at 5-ft intervals, this frequency proved to be impractical due to hole-caving problems during drilling operations. The hole-caving resulted from the instability of the landfill materials and coarse deposits occurring beneath the site. To compensate, close attention was given to the drill cuttings from each of the well borings as they were brought to the surface to observe for possible changes in lithology. Each recovered split-spoon formation sample was described by the hydrogeologist; the geologic logs for each well boring are presented in Appendix A. Portions of each sample were stored in a glass jar and sealed with plastic, and at the end of each day, the head space in the partially filled sample jars was measured for the presence of organic vapors.

3.1.1.2 Soil Sampling for VOC Analysis

As specified in the SOP, split-spoon soil samples from 30-ft intervals were collected in each well boring for VOC analyses using USEPA Methods 601 and 602. These samples were taken from the samples collected from the 10-ft sampling intervals as described in Section 3.1.1.1. A portable FoxboroTM organic vapor analyzer (OVA) Model 118 was used to measure the headspace in jarred formation samples for the presence of organic vapors. The detection limit of this instrument is 1 part per million (volume/volume) as methane. That portion of the sample not used for head space analysis at the 30-ft intervals was used to fill two 40-milliliter (ml) sample vials, which were hand-delivered to EcoTest Laboratories, Inc., North Babylon, New York, for analysis.

3.1.1.3 Geophysical Logging

After each well boring was drilled to its final depth, the borings were geophysically logged by gamma and electric methods. However, due to problems in the field with the gamma probe, gamma logs were not obtained from Wells SY-2D, SY-3D, and SY-6D.

The electric log records the apparent resistivities of the subsurface formations and the spontaneous potentials generated in the borehole. This log is useful in differentiating between saturated clay formations (which exhibit relatively low resistivities) and saturated sand formations (which exhibit relatively high resistivities).

The gamma log measures the radiation of gamma rays from certain radioactive elements that occur naturally in subsurface clay formations. Low intensity gamma-ray activity indicates a sand layer and, conversely, high-intensity gamma-ray activity indicates a clay layer. The geophysical logs for each well boring are presented in Appendix B.

3.1.1.4 Well Construction

Each of the seven monitoring wells was constructed of threaded, flush-joint 4-inch inside diameter, schedule 40 PVC casing and 10 ft of 20 slot screen (0.020-inch slot openings) composed of the same material. During the construction of Well SY-3D, the 4-inch diameter PVC screen was ruptured, and, therefore, as a corrective measure, 3-inch diameter screen and casing was installed inside the 4-inch casing and screen, following the protocols described in this section. Once the well was set at the desired depth, gravel pack material (J. Morie Co. No. 1 sand) was placed in the well annulus from the bottom of the well boring to several feet above the top of the screen, completely covering the screen. A 2-ft thick layer of bentonite pellets was placed directly above the gravel pack to seal the screen zone. The remaining well annulus was filled with a bentonite slurry (consisting of 100 percent bentonite), which was emplaced through a tremie pipe from the top of the bentonite seal to within a few feet from land surface. Five of the seven wells (SY-1D, SY-2R, SY-2D, SY-3D, and SY-8) were cemented in place with aboveground, locking, protective steel casings. The other two wells (SY-6D and SY-9) were completed at grade level with flush-mounted, locking curb box assemblies because of the proximity to traffic in these two areas. Well construction details are provided in Table 4, and well construction diagrams are presented in Appendix C.

Well SY-9 was completed in the top of the water table (where the more significant water-quality impacts should be evident), just above a clay layer. This placement, however, resulted in 1 ft of standing water in the well making sample collection more time consuming because of the limited yield. Installation of the well screen below the clay layer might have resulted in contaminants going undetected.

Following installation, five of the seven wells were developed with a submersible pump until it was determined that as much fine-grained material had been removed as was practicable to produce relatively clear and sediment-free water. Wells SY-3D and SY-9 were developed by bailing (see Appendix C).

Dedicated submersible pumps were permanently installed in five of the seven wells installed during the On-Site Ground-Water Study. Submersible pumps were not installed either in Well SY-9 (because this well had less than 1 ft of standing water) or Well SY-3D (because of the 3-inch diameter construction).

3.1.2 Surveying of Monitoring Wells

After completion of the well-installation program (i.e., wells installed during both the On-Site Ground-Water Study and the Landfill Dimension Study [see Sections 3.1.1 and 3.2.3]), the wells were surveyed to USGS datum by LKB (New York State-licensed surveyors) to an accuracy of 0.01 ft. The horizontal locations were also surveyed to the New York State Plane Coordinate System. These data are presented in Table 5; measuring-point elevation data are given in Table 4.

3.1.3 Water Quality Monitoring

Two rounds of water samples were collected from the 15 on-site monitoring wells in May and June 1988 by Geraghty & Miller for analyses of selected USEPA Priority Pollutant compounds and additional parameters to provide for a complete data base (see Appendix D). These samples were collected in accordance with the protocols detailed in the SOP. The samples were hand-delivered to EcoTest Laboratories, Inc., North Babylon, New York, for analysis; all samples were accompanied by chain-of-custody forms. York Laboratories, Inc., Monroe, Connecticut, was subcontracted by EcoTest to perform the organic analyses requiring gas chromatography/mass spectrometry (GC/MS) methods (USEPA Method 624 and 625). The documentation (deliverables) for the analytical results and procedures followed were subjected

to a data validation process by Geraghty & Miller. Data validation packages have been submitted separately to the USEPA.

During both the May and June sampling rounds, representatives from the USEPA, Versar, Inc. (the USEPA subcontractors), and LKB were present on a part-time basis.

3.1.3.1 First Round Ground-Water Sampling (May 1988)

The first round of water samples was collected from May 2 to May 5, 1988, for the selected list of USEPA Priority Pollutant compounds and the additional parameters mentioned above (Section 3.1.3). The organic analyses for this round of sampling were performed by GC/MS methods (USEPA Method 624 and 625) except for PCBs which were analyzed using USEPA Method 608 which allows for a lower detection limit. Two samples, filtered and unfiltered, were collected from each well for metals analyses.

A full replicate sample was collected from Well SY-3D and labeled as SY-A so the laboratory would not know this was a replicate sample. Field blanks for VOC analyses were prepared at the site for each of the 4 days of sampling, and a trip blank (supplied by EcoTest) accompanied each group of samples that was hand-delivered to EcoTest. Split samples were collected from Wells SY-2D and SY-3D by Versar, Inc., the USEPA representative.

Five of the 15 monitoring wells sampled were evacuated using the dedicated submersible pumps. After three well volumes of water had been removed, water samples were collected from the pump discharge in accordance with the protocols described in Appendix C of the SOP. The ten remaining wells were evacuated (three well volumes) and sampled with a TeflonTM bailer according to a similar protocol (also given in Appendix D in the SOP). After the sample bottles provided for each well had been filled, additional samples were collected for pH, specific conductivity, and temperature which were measured in the field.

Well SY-9 was found to have less than 1 ft of water in it, and consequently, repeated visits to this well over a period of 2 days were required to fill the sample bottles. Although 2 days were required to fill the large amount of bottles for analyses of target analyte list (TAL) parameters, VOA bottles were the first to be filled on the first day of sampling.

3.1.3.2 Second Round Ground-Water Sampling (June 1988)

From June 6 to June 8, 1988, the second round of water samples were collected from the 15 on-site monitoring wells for the same parameters analyzed in the first sampling round (May 1988). For the second round, however, the volatile organic analyses were performed by using USEPA Methods 601 and 602, as specified in the SOP; this method provides for a lower detection limit for VOCs. Only filtered samples were collected from each well for metals analysis during the June sampling round.

As before, a full replicate sample was collected from Well SY-3D and labeled as SY-A. Field blanks were prepared at the site daily for VOC analysis, and trip blanks, supplied by EcoTest for analysis of VOCs, accompanied each group of hand-delivered samples. Versar collected split samples from Wells W-4 and SY-8 during the June sampling round.

The sampling protocol followed during the first sampling round was repeated for the second sampling round. Well SY-9 was again nearly dry; it contained less than 1 ft of water. Repeated visits were required to fill the sample bottles from this well. As was the case during the May sampling round, although 2 days were required to fill the large amount of bottles for analyses of target analyte list (TAL) parameters, VOA bottles were the first to be filled on the first day of sampling.

3.1.4 Water-Level Monitoring

Since the installation of the nine new wells (seven wells during the On-Site Ground-Water Study and two wells installed during the Landfill Dimension Study [see Section 3.2.3]) during the Interim RI, water levels have been, and continue to be, measured on a monthly basis to monitor for fluctuations in the depth to water and to determine the direction of ground-water flow (horizontal and vertical). A summary of these data is provided in Table 6, which also includes the elevations of the measuring points of the wells. Discussions of the horizontal and vertical direction of ground-water flow, the hydraulic gradients, and the observed water-level fluctuations are presented in Sections 4.1.1 and 4.1.2.

3.2 Landfill Dimension Study

The two principal objectives of the Landfill Dimension Study were to provide additional information on the depth of the landfill and to characterize the waste in the landfill.

The scope of work for accomplishing these objectives included drilling of four soil borings; collecting soil/landfill samples for hydrogeologic description, headspace analysis, and laboratory analysis; installing two shallow monitoring wells; and collecting two rounds of ground-water samples.

3.2.1 Soil Borings

From October 29 to November 17, 1987, four soil borings (B-1, B-2, B-3 and B-4), were drilled in the landfill area with the hollow-stem auger method at the locations shown on Figure 3A. Borings B-1 and B-2 were drilled through the landfill material to penetrate 10 ft into native soil, and Borings B-3 and B-4 were drilled to greater depths (10 ft below the water table) so that wells could be installed (see Section 3.2.3). To minimize the potential of igniting combustible gases, potable water (approximately 25 gallons) was added to the boreholes when gas measurements greater than 25 percent of the lower explosive limit (LEL) were encountered.

Samples of the landfill materials and native soil were collected at 5-ft intervals with a split-spoon core barrel, as specified in the SOP. These samples were described by the supervising hydrogeologist; the geologic logs for these samples are presented in Appendix A. Portions of the samples were placed in glass jars which were sealed with plastic and stored for headspace analysis at the end of each working day. A portable FoxboroTM organic vapor analyzer (OVA) Model 118 was used to measure the headspace in jarred formation samples for the presence of organic vapors. The detection limit of this instrument is 1 part per million (volume/volume) as methane.

3.2.2 Collection of Soil Samples for Laboratory Analysis

Three samples of the landfill materials were collected for laboratory analysis from each of the four soil borings to chemically characterize the fill material; these samples were selected from the set of samples collected at 5-ft intervals as specified in the SOP. The samples were hand-delivered to EcoTest Laboratories, Inc. for analysis of VOCs, PBCs, base/neutral and acid extractable compounds, and leachable metals.

3.2.3 Installation of Monitoring Wells

Two shallow (water-table) monitoring wells were installed in two of the four soil borings (B-3 and B-4) and numbered as W-3 and W-4, respectively. These wells were

constructed of 2-inch diameter, flush-joint PVC screen (10 ft) and casing, with the top 2 to 3 ft of screen extending above the water table. The remaining well construction proceeded in the prescribed fashion (see Section 3.1.1.4). These two wells were developed by bailing until a good hydraulic connection between the well screens and surrounding formation was established and relatively sediment-free water was produced.

Wells W-3 and W-4 were incorporated into both the water-quality monitoring and the monthly water-level monitoring programs. Well construction details are included in Table 4, and well construction diagrams are included in Appendix C.

3.3 Subsurface Gas Study

The subsurface gas study was designed and implemented to determine the nature and extent of the landfill gases on-site. The scope of work for making this determination included the installation of 19 gas monitoring wells, monthly monitoring of the wells, collection of gas samples from the wells (two rounds) for laboratory analyses, and pressure testing of the wells.

3.3.1 Gas Well Installation

From April 20 to April 29, 1987, 19 gas monitoring wells (G-1 through G-19) were installed at the site. The gas well locations correspond very closely to the locations proposed in the SOP and are shown on Figure 4. Each gas well was installed by drilling an 8-inch diameter borehole, with a hand-operated power auger, to approximately 4 to 5 ft below land surface. An attempt was made to drill the borings with a hand-operated bucket auger, but this effort was thwarted by dense cover material and gravel just below the surface. Five of the 19 gas wells (G-2, G-10, G-17, G-18, and G-19) penetrate the clean fill cover into landfill material. These five wells are located along the long axis of the landfill. The remaining 14 gas wells are positioned very close to the boundaries of the site (i.e., fence or railroad) at locations where no landfill was expected.

After each borehole was drilled, hand-slotted 1-inch diameter PVC casing was installed. Gravel pack material (J. Morie Co. No. 1 sand) was emplaced in the well annulus around the slotted portion of the casing to within 1 ft below land surface. Then, a 1-ft thick layer of bentonite slurry (100 percent bentonite) was placed above the gravel to seal the screen zone. Each well was completed with a press-fitted cap which had a polyethylene/silicon tubing

connector for gas monitoring. A summary of the construction details for gas monitoring wells is provided in Table 7.

3.3.2 Landfill Gas Monitoring

Since May 1987, the 19 gas monitoring wells have been, and continue to be, monitored with an organic vapor analyzer (OVA) for the presence of methane and total volatile organic vapors by using the activated charcoal filter probe and the standard probe, respectively, for each. However, six gas monitoring wells (G-1, G-5, G-9, G-12, G-16, and G-19) are no longer monitored as they were destroyed by vandals. Because of the planned on-site remediation, these wells were not replaced.

During each monitoring event, the OVA is calibrated to a methane standard before it is used in the field, and fresh activated carbon is used to replace spent carbon in the filter probe. Attempts are made to conduct monitoring activities during periods of low or falling barometric pressures (which are recorded for each monitoring event) when higher concentrations of landfill gases should be present.

It was determined during the first monitoring event (May 8, 1988) and subsequent monitoring events that the highest concentrations of landfill gases were detected within the first few seconds of measurement. Therefore, it was not necessary to plot the concentration versus time profiles which were discussed in Section 2.5.2 of the SOP.

3.3.3 Analyses of Landfill Gas Samples

As specified in the SOP, in July 1987, gas samples were collected with laboratory traps from ten of the 19 gas wells for VOC analyses (USEPA Methods 601 and 602). These were the ten wells which consistently had the highest concentrations of total (non-methane) VOCs measured with the OVA (see Section 3.3.2). A second round of gas samples was collected in August/September 1988 as a result of analytical limitations experienced during the first round. Samples from both rounds were hand-delivered to EcoTest for analysis. Sampling protocols are given in Appendix E.

3.3.3.1 First Round Gas Sampling (July 1987)

On July 7, 8, and 9, 1987, two volumes of gas samples (250 milliliters [ml] and 1,000 ml) were collected with laboratory traps from each of the ten gas wells sampled. The purpose of collecting two volumes of samples was to broaden the detection limit range. (The lower volume sample provides for the maximum detection limit, and the higher volume sample provides for the minimum detection limit.) In this way, VOCs occurring in high concentrations could be quantified with the analysis of the lower volume sample, and, VOCs occurring in low concentrations could be quantified with the analysis of the larger volume sample.

Due to concern that some VOCs might be breaking through the 1,000-ml trap sample, a second trap was placed in series to the first trap. Any VOCs breaking through the first trap would thus be adsorbed in the second trap. Therefore, quantification of VOCs for the 1,000-ml sample would be a sum of the detections of the two traps in series.

Versar, Inc. (the USEPA representative) was present for the July 1987 sampling event to observe protocols and collect a split sample from Gas Well G-15. A trip blank was submitted with the gas well samples (laboratory traps) for analysis as a quality-control measure. In addition, a blank sample was collected in the field by pumping ambient air through a GC trap.

3.3.3.2 Second Round Gas Sampling (August/September 1988)

On August 26, and September 1, 1988, a second round of gas samples was collected (two sample volumes per gas well) from ten of the 19 gas monitoring wells at the site. The purpose of this round of sampling was to quantify vinyl chloride, which could not be quantified during the previous (July 1987) sampling round. Quantification of this compound was not possible because the upper reportable detection limit (400 parts per billion [ppb]) was exceeded as a result of the sample volume being too large (250 ml) for the concentration of vinyl chloride present in the sample. Therefore, a smaller sample volume (100-ml) was selected to increase the upper reportable detection limit for this compound. As before, a 1,000-ml sample was also collected from each well to provide for the detection of VOCs occurring in low concentrations.

Three of the gas monitoring wells sampled during the first monitoring round were apparently destroyed by vandalism (G-12, G-16, G-19); therefore, three replacement wells were selected for sampling (G-3, G-4, and G-14) during the August 1988 round, based on the same criteria used to select the original ten wells sampled.

3.3.4 Pressure Testing of Gas Monitoring Wells

On June 15, 1987, all of the gas wells were tested to determine whether they were venting under pressure by attaching a 1-liter gas sample bag to the well head. The air bags were left attached to each well for a period of 1 hour. After that hour had elapsed, each air bag was inspected to determine whether gases had entered. This work was carried out in accordance with Section 2.5.2 in the SOP. The barometric pressure on the day of testing was 29.74 inches of mercury and steady.

4.0 RESULTS

Based on the data generated during the Interim RI and observations made in the field, the results for each part of the RI are presented in the appropriate sections below.

4.1 On-Site Hydrogeology

The general geologic sequence penetrated at the site is similar to the previously referenced descriptions of the composition of the Upper Glacial and Magothy Formations (Sections 2.7.1 and 2.7.2, respectively). Drilling through the Upper Glacial Formation encountered principally coarse sand and gravel ranging in color from yellow to dark brown. The lithology is evidenced on the hydrogeologic cross sections A-A', B-B', and C-C' presented on Figure 5, and is documented in the geologist's logs provided in Appendix A. The gamma logs obtained from the borings for Wells SY-1D and SY-8 are superimposed on these wells on Figure 5. As mentioned in Section 3.1.1.3, gamma logs for other wells (installed under

Geraghty & Miller's direction) appearing in this cross section were not obtained due to equipment problems experienced in the field.

During the field investigation, the Geraghty & Miller hydrogeologists observed an apparently distinct separation (contact) between the Upper Glacial Formation and the underlying Magothy Formation. During drilling through the Magothy Formation, finer-grained sediments predominated and consisted of deposits of medium to fine-grained sand with clay stringers with or without silt, fine-grained sand with silt, and clay with sand and/or silt. Although less prevalent, some medium- to fine-grained sand with gravel was also encountered. Sediments of the Magothy Formation exhibited a broader range in color than the Upper Glacial Formation with colors ranging from white and black clay to white, gray, yellow, and tan sands, as documented on the geologist's logs provided in Appendix A. Cross sections A-A', B-B', and C-C' (Figure 5) corroborate this heterogeneous composition of the Magothy Formation and illustrate the apparent contact between the finer grained Magothy deposits and the coarser grained Upper Glacial deposits.

4.1.1 Horizontal Direction of Ground-Water Flow

A summary of the water-level elevation data collected from the 15 on-site monitoring wells that screen (tap) the relative shallower and deeper portions of the Magothy aquifer are presented in Table 6. To depict the horizontal direction of ground-water flow, potentiometric surface maps were drawn of both the shallow (Figures 6 and 8) and the deep (Figures 7 and 9) zones of the Magothy aquifer using the August and October, 1988 data, respectively. Although the term potentiometric surface is often associated with the potential water surface elevation in a confined aquifer, the term is not used in this context in this report. Fetter defines the potentiometric surface as "a surface that represents the level to which water will rise in tightly cased wells. If head varies significantly with depth in the aquifer, then there may be more than one potentiometric surface. The water table is a particular potentiometric surface for an unconfined aquifer" (Fetter, 1980).

The potentiometric surface maps for the shallow zone of the Magothy aquifer indicate a northeasterly direction for the horizontal component of flow in August (Figure 6) and an east-northeasterly direction in October (Figure 8). The potentiometric surface maps for the deeper zone of the Magothy aquifer indicate a north-northeasterly direction for the horizontal component of flow in August (Figure 7) and a northerly direction of flow in October (Figure 9).

In summary, the general direction of the horizontal component of ground-water flow is in a northeasterly direction with a more easterly component in the shallow zone and a more northerly component in the deeper zone of the Magothy aquifer.

The northeasterly flow direction observed at the site is consistent with regional maps developed for the area (Isbister 1966; Kimmel 1971). To further confirm the regional horizontal ground-water flow direction, on November 18, 1988, water levels were measured in Nassau County observation wells located within approximately 3 miles of the site. These data (Table 8) were used to prepare a regional potentiometric surface map (Figure 10).

Figure 10 shows that the site is situated north of the regional ground-water divide which trends from east to west throughout Long Island. Previously referenced maps show the ground-water divide to be in the same position (south) relative to the site. North of the divide, ground water flows toward the north with eventual discharge to Long Island sound; and south of the divide ground water flows toward the south with eventual discharge to the bays or the Atlantic Ocean. Because of its location, there was concern that the divide may shift across the site seasonally and thus cause a reversal in the horizontal direction of ground-water flow. Due to this concern, water levels were measured in the monitoring wells at the site on a monthly basis beginning in February 1988 and continuing to the present (Table 6). A review of the ground-water elevation data presented in Table 6 shows that although water levels fluctuated (up to several feet between monthly measurements), the prevailing direction for the horizontal component of flow remained to the northeast, which indicates that the ground-water divide does not shift across the site, but remains south of the site.

It should be noted that water-level elevation data from Monitoring Wells W-3, W-4, and SY-9 were not used in the preparation of the potentiometric surface maps for the shallow zone of the Magothy aquifer because these wells are screened at higher elevations (90.1 to 86.3 ft relative to msl) than the other on-site wells; they straddle the water table and are, therefore, representative of the water-table surface. The shallow wells which were used for preparing the potentiometric surface maps are screened below the water table at elevations (from the top of the screens) ranging from 51 to 70.5 ft relative to msl. The elevations of the tops of the screens of the four deeper wells used to prepare the potentiometric surface maps for this zone have a range in elevation of 13.1 to 9.1 ft relative to msl.

4.1.2 Vertical Direction of Ground-Water Flow

An analysis of the vertical component of ground-water flow at the site was made by first comparing the water-level elevations between cluster wells to calculate the vertical hydraulic gradient and then by comparing the vertical hydraulic gradients to the horizontal hydraulic gradients. The vertical hydraulic gradients at the site were determined from water-level data collected from May through October, 1988 (Table 6). Determinations of the vertical hydraulic gradient were not made prior to May 1988 because of uncertainties with respect to well development. All wells were considered fully developed following additional well development work performed on April 12, 1988. The vertical hydraulic gradients were determined by calculating the differences in potentiometric heads (water-level elevations) between the shallow and deep wells in each of the four on-site monitoring well clusters and dividing by the vertical distance between the midpoints of the two well screens in each cluster. These data indicate that a relatively high downward vertical hydraulic gradient, averaging 0.015 ft/ft, exists between the four well clusters (as opposed to the relatively low average horizontal hydraulic gradients for the shallow and deep potentiometric surfaces, respectively, of 0.00067 ft/ft and 0.00053 ft/ft). Thus, based on the comparison of the vertical and horizontal hydraulic gradients, the vertical component of ground-water flow appears to be more pronounced than the horizontal component of flow and is in a downward direction.

In summary, the site appears to be located north of the regional ground-water divide in a deep flow recharge area with ground-water consistently observed to be flowing generally in a northeasterly direction in the horizontal plane and in a downward direction in the vertical plane.

4.2 Ground-Water Quality

As discussed in Section 3.1.3, two rounds of ground-water quality samples were collected: May 2 to 5, 1988, and June 6 to 8, 1988. The analytical parameters for ground-water samples are listed in Appendix D.

4.2.1 Volatile Organic Compounds

The analytical results for VOCs in ground-water samples are given in Table 9. The first round of samples (May) was analyzed by GC/MS to allow for unequivocal identification; the second round of samples (June) was analyzed by gas chromatography to allow for a lower detection limit.

As shown in Table 9, VOCs were detected above the quantification limit in six on-site monitoring wells in May, in total concentrations ranging from 6 to 26 micrograms per liter (ug/L). In three of these six wells (SY-1D, SY-4, and SY-6D), chloroform was the only VOC detected. Chlorobenzene was detected in Well SY-3D (8 ug/L); 1,2-dichloroethene in Well SY-7 (7 ug/L); and tetrachloroethene in Well SY-8 (19 ug/L). Additional compounds were detected, but in concentrations below the quantification limit (5 or 10 ug/L, depending upon the sample); these concentrations are estimated and consequently were not used in the total VOC values. VOCs were not detected in trip or field blanks.

In June, total VOCs were detected in ten on-site monitoring wells in concentrations ranging from 1 ug/L (Well SY-6) to 40 ug/L (Well W-4). In general, the results of the May and June analyses correlate very well both in terms of individual VOCs detected and their detected concentrations. The main exception to this is the detection of chlorobenzene and 1,4-dichlorobenzene in Well W-4, totaling 40 ug/L. In May, no VOCs were quantified in this well. The other exceptions include the detection of additional compounds in Wells SY-2D (tetrachloroethene [7 ug/L] and 1,1-dichloroethane [2 ug/L]), SY-7 (vinyl chloride [1 ug/L] and 1,1-dichloroethane [2 ug/L]), and SY-8 (1,1-dichloroethane [2 ug/L]). Again, VOCs were not detected in the trip or field blanks.

4.2.2 Extractable Compounds

The results of PCB and base/neutral and acid extractable analyses from ground-water samples are presented in Tables 10, 11, and 12, respectively. PCB analyses were performed by EcoTest Laboratories by USEPA Method 608 (GC). Base/neutral and acid extractable analyses were performed by York Laboratories by USEPA Method 625.

Base/neutral and acid extractable compounds were detected in each of the monitoring wells in the May samples. However, only one result was above the quantification limit (di-n-octyl phthalate in Wells SY-3 and SY-3D, and in replicate SY-3A); this compound was also found in the method blank. Di-n-octyl phthalate is one of a group of compounds (phthalic acid esters) which are commonly used as plasticizers and are frequently found as a laboratory

artifact in samples; consequently, USEPA methods recognize this persistent problem and compensate for it (Bleyler 1988). Of the other detectable base/neutral extractable compounds, most were less than 10 ug/L and many less than 1 ug/L.

In June, base/neutral extractable compounds were also detected in each of the monitoring wells. However, only di-n-octyl phthalate and bis(2-ethylhexyl)phthalate were found in five on-site wells (SY-2D, SY-3A [SY-3D replicate], SY-4, SY-9, and W-4). Di-n-octyl phthalate was the only base/neutral compound detected in Well SY-9 and not also found in the blank. In the other four wells, bis(2-ethylhexyl)phthalate was found in each of the method blanks.

Only one acid extractable compound (4-methylphenol) was detected in the May samples (Wells SY-5 and SY-7), in each case less than the quantification limit. Acid extractable compounds were not detected in the June samples.

PCBs were not detected in the May or June samples.

4.2.3 Metals

As discussed in Sections 3.1.3.1 and 3.1.3.2, both filtered and unfiltered samples were collected for metals analysis in May, and only filtered samples were collected for metals analyses in June. Filtered samples reflect the dissolved concentrations of metals in the sample. Most of the unfiltered samples were described in the field as being turbid, thus these samples apparently contained particulate material. Both filtered and unfiltered samples were acidified in the field for preservation. However, the acidification of samples containing particulate matter tends to strip sorbed metals through cation exchange thereby putting them into solution and resulting in an increase in the total metal concentrations in the sample (Strausberg 1983). Thus, the results of the unfiltered metals analysis do not reflect dissolved metals in the ground water. Rather, these results reflect the combination of dissolved metals and desorbed metals through acidification. Samples were analyzed by EcoTest Laboratories, Inc. for both sampling rounds. Analytical results for the metals analyses are presented in Table 13.

Of the filtered samples, six of the 17 metals analyzed for (lead, mercury, nickel, selenium, chromium, and silver) were not detected in any of the 15 wells sampled during the May or June sampling rounds. Beryllium was detected in only Well SY-2R at a concentration of 0.002 milligrams per liter (mg/L) and 0.0035 mg/L, in May and June, respectively.

In May, cadmium and thallium were not detected in any of the wells; however, in June, cadmium was detected in one well (SY-9) at a concentration of 0.0025 mg/L and thallium was detected in five wells (SY-1D, SY-2D, SY-3D, and replicate [SY-A], SY-4, and SY-7) at concentrations ranging from 0.005 mg/L to 0.027 mg/L.

In May, copper was detected in three wells (SY-3D and replicate, SY-9, and W-4) at concentrations ranging from 0.02 mg/L to 0.03 mg/L. Copper was detected in the same wells in June (except Well W-4) at concentrations of 0.12 mg/L (SY-3D) and 0.04 mg/L (SY-9).

Arsenic was detected in six wells in May (SY-1, SY-3, SY-3D and replicate, SY-5, SY-7, and W-3) in concentrations ranging from 0.002 mg/L to 0.06 mg/L. In June, this compound was found in four of these same wells (SY-1, SY-3, SY-3D and replicate, and W-3) at concentrations ranging from 0.003 mg/L to 0.040 mg/L. In unfiltered samples, although arsenic was detected above the New York State Drinking Water Standard in Wells SY-1, SY-3, and W-3, these results are not relevant given the discussion provided above.

Antimony was detected in all of the monitoring wells in May (except SY-2R, SY-8, and W-4) at concentrations ranging from 0.005 mg/L to 0.010 mg/L. In June, this compound was detected in all of the wells (except SY-1, SY-3, SY-6D, and SY-7) at concentrations ranging from 0.007 mg/L to 0.015 mg/L.

Barium was detected in all of the wells in May at concentrations ranging from 0.06 mg/L to 3.8 mg/L. In June, barium was also detected in all the wells (except SY-6) at concentrations ranging from 0.05 mg/L to 0.92 mg/L.

The detections of barium in these samples may be due in part to leaching from filter paper (Treutlein, pers. comm. 1989). According to EcoTest, the laboratory performing the metals analysis, tests were performed independently which concluded that filter paper typically used in the laboratory for environmental samples consistently leached barium during filtration of test samples in the low part per billion range. It should be noted that in almost every case barium was found in higher concentrations in the filtered samples than in unfiltered samples analyzed during the Interim RI. In contrast, other metals were invariably found in higher concentrations in the unfiltered samples, as previously discussed. If samples are not field-filtered, they may have to be filtered in the laboratory (depending in the degree of turbidity); thus the barium problem may be difficult to avoid under many conditions.

Zinc was detected in most of the wells in May (except SY-2D, SY-4, and SY-6) at concentrations ranging from 0.02 mg/L to 3.2 mg/L. In June, zinc was detected in only two of the wells: SY-8 (4.0 mg/L) and SY-9 (0.15 mg/L).

Iron was detected in eight wells in May (SY-1, SY-3, SY-3D and replicate, SY-5, SY-6D, SY-7, SY-8, and W-3) at concentrations ranging from 0.06 mg/L to 58 mg/L. In June, iron was detected in 12 of the wells (except SY-1D, SY-2R, and SY-9). The highest concentrations of this compound were found in wells constructed with steel casings and screens (wells installed during the ERM investigation). Thus, it appears that the source of high iron detected in these wells is likely the result of well construction.

Sodium, potassium and iron are discussed in the context of leachate indicator parameters in Sections 4.2.4, 4.5.1, and 4.5.2.

4.2.4 Additional Ground-Water Parameters

Ground-water samples were analyzed for several additional parameters as part of the Interim RI. This group of parameters includes naturally occurring anions and cations, some of which can be extremely useful in determining landfill leachate impacts to ground water. Ammonia, hardness, alkalinity, iron, sodium, potassium, dissolved solids, and chloride have been employed as indicator parameters for landfill leachate (Saar & Braids, 1983; Geraghty & Miller, Inc. 1985).

The analytical results for these parameters are presented in Tables 13 and 14. The concentrations of selected leachate indicator parameters detected in the monitoring wells in June are presented on Figure 11 (total dissolved solids [TDS], chloride [cl], and ammonia [NH₃]) and on Figure 12 (hardness [Har] and alkalinity [Alk]). These parameters were selected for display on these two figures because they appear to be most indicative of the leachate impacts observed at the site. A more detailed discussion of these results is presented in Sections 4.5.1 and 4.5.2.

4.3 Landfill

Based on descriptions of the materials encountered from the four soil borings (B-1, B-2, B-3, and B-4) during drilling (see Figure 3A and Appendix A), and the laboratory analyses of samples collected from these borings (see Tables 17, 18, 19, and 20), the lateral and vertical extent of the landfill was determined, as well as the chemical quality of the fill materials. These findings satisfy the objectives of the Landfill Dimension Study as defined in Section 3.2 and are discussed below.

4.3.1 Extent and Thickness of Landfill

The Syosset Landfill is approximately 35 acres in size, extending from the LIRR toward the northwest to the vicinity of Well SY-9 toward the southeast. This is consistent with a previous investigation which arrived at similar conclusions. The landfill occupies most of the area between the northern and southern boundaries of the site, except for the areas surrounding the animal shelter and the defunct incinerator which appear to be situated atop native soils.

The areal extent and thickness of the landfill is depicted on Figure 13. Geologic logs of well and soil borings from investigations by Geraghty & Miller, LKB, and ERM were used to compile this figure. A summary of the depths of the landfill encountered during the drilling of these borings is presented in Table 15, and geologic logs are presented in Appendix A. As illustrated on Figure 13, the landfill appears to be divided into two lobes with an existing road coinciding with the ridge separating the two lobes.

The deepest lobe of the landfill is found in the central part of the western half of the site where a depth of approximately 91 ft was encountered in Soil Boring D. The other lobe appears to reach a maximum thickness of approximately 58 ft in Boring B-4 which is in the central part of the eastern half of the site, northeast of the defunct incinerator building.

4.3.2 Chemical Characteristics of the Fill

As discussed in Section 3.2.2, soil samples collected from the four borings (B-1, B-2, B-3, and B-4) were analyzed for the selected list of USEPA Priority Pollutant parameters given in Appendix D. Analyses were performed on three samples collected from each borehole. Although the objective was to perform analyses of three representative samples of the landfill from each boring, only half of the samples collected (six out of 12) were actually samples of the landfill because the landfill was shallower than originally anticipated.

4.3.2.1 Volatile Organic Compounds

The results of the VOC analyses for soil samples collected from soil borings (B-1 through B-4) are presented in Table 16. VOCs were analyzed by York Laboratories using USEPA Method 624. The results for soil samples collected from the well borings drilled during the On-Site Ground-Water Study are presented in Table 16A. These samples were analyzed by EcoTest Laboratories using USEPA Methods 601 and 602.

VOCs were detected in total concentrations ranging from 19 micrograms per kilogram (ug/kg) in B-1 (55 ft below land surface) to 180 ug/L in B-3 (40 ft below land surface). VOCs were not detected in samples collected from B-2 (85 ft below land surface), B-3 (80 ft below land surface, 110 ft below land surface), and B-4 (70 ft below land surface, 100 ft below land surface). In each of these instances, except the 80 ft sample from B-3, the samples were collected from below the bottom of the landfill. Several VOC compounds were detected in approximately the same concentration range (approximately 0 to 40 ug/kg), the summation of which yielded the total VOC value. The exception is the detection of chlorobenzene in B-3 in a concentration of 180 ug/kg, which is the highest single concentration of an individual VOC and also the highest total concentration.

It should be noted that acetone was detected in relatively high concentrations in several of the samples; however, this compound was also found in the blanks. The likely source for this detection is the acetone used in the decontamination of sampling equipment. VOCs were detected in only two soil samples collected from the well borings during the On-Site Ground-Water Study. Total VOCs were detected in a concentration of 5 ug/kg in Well Boring SY-9 (120 ft below land surface) and 335 ug/kg and 9 ug/kg in Well Boring SY-8 (30 and 90 ft below land surface, respectively).

4.3.2.2 Extractable Compounds

The results of the PCB, base/neutral, and acid extractable analyses are presented in Tables 17, 18, and 19, respectively. PCB analyses were performed by EcoTest Laboratories using USEPA Method 608, and base/neutral, and acid extractable analyses were performed by York Laboratories using USEPA Method 625.

PCBs were detected in total concentrations of 730 ug/kg and 380 ug/kg in Boring B-1 (15 and 40 ft below land surface, respectively) and 4,600 ug/kg, 560 ug/kg, and 171 ug/kg in Boring B-4 (40, 70, and 100 ft below land surface, respectively). PCBs were not detected in any of the samples collected from Borings B-2 and B-3 (Table 17).

Base/neutral compounds were detected in one of the samples collected from each boring at the same sample depth (40 ft below land surface). In each sample where base/neutral compounds were found, only one or two compounds were detected, except the sample from Boring B-3 where several base/neutral compounds were detected in a total concentration of 9,930 ug/kg. Napthalene was detected in B-1 (610 ug/kg), diethyl phthalate was detected in B-2 (40,000 ug/kg), and phenanthrene and fluoranthene were detected in B-4 (8,400 ug/kg and 9,000 ug/kg, respectively)(Table 18). Several other base/neutral compounds were detected below the quantification limit, and in some cases also in the method blanks in each sample analyzed; therefore, these values were not included in the total values.

Acid extractable compounds were not detected above or below the quantification limit in any of the samples analyzed (Table 19).

4.3.2.3 Leachable Metals

Metals were analyzed by EcoTest Laboratories using extraction procedure (EP) toxicity testing. The results of these analyses are presented in Table 20. No metals were detected in concentrations exceeding the federal standard (40 CFR 261.30) for leachable metals.

4.4 Subsurface Gas

Based on the results of the monthly gas monitoring, the analyses of gas samples collected from the gas monitoring wells, and the pressure testing of these wells, the nature and extent of landfill gases on-site has been characterized. These findings satisfy the objectives of the Subsurface Gas Study described in Section 3.3 and are discussed below.

4.4.1 Methane and Total VOCs (Non-Methane)

The gas monitoring wells were measured, and continue to be measured, for the presence of methane and total organic vapors (non-methane) with an OVA on a monthly basis beginning May 8, 1987. The results of this monitoring program are presented in Table 21.

In ten of the wells (G-1, G-3, G-4, G-5, G-6, G-10, G-11, G-12, G-13, and G-14), landfill gases were not detected for the majority of the monitoring period. These wells are located along most of the perimeter of the landfill, except the southwestern area. When gases were detected, they were found in concentrations mostly in the low parts per million (ppm) range. In the remaining nine wells, located along the long axis of the landfill and the southwest area of the landfill, high concentrations of landfill gases were detected frequently in concentrations exceeding the upper quantification limit of the OVA. (The upper quantification limit [1,000 or 100,000 ppm] varied depending on the OVA model used.)

A passive gas ventilation system consisting of a trench (which parallels the fence separating the site from the school), and a series of vertical venting pipes within the trench, has been monitored for the presence of methane gas by the TOB-DPW since 1981. Since that time, methane has occasionally been detected in the vent pipes, most notably in the fall 1988, which prompted the TOB-DPW to rehabilitate the system. However, methane has reportedly never been detected in two permanent gas monitoring points on the school property.

4.4.2 Volatile Organic Compounds

As discussed in Section 3.3.3, samples of landfill gases were collected for laboratory analyses from the ten gas monitoring wells exhibiting the consistently highest concentrations of methane and non-methane compounds. The first round of samples was collected on July 7, 8, and 9, 1987, and the second round of samples was collected on August 26 and September 1, 1988. The analytical results for both sampling rounds are presented in Table 22.

In July 1987, total VOCs were detected in concentrations ranging from 45 parts per billion (ppb) in Gas Well G-8 to greater than 1,335 ppb in Gas Well G-2. Individual VOCs detected in highest concentration⁴ included vinyl chloride, chloroethane, methylene chloride, chloroform, tetrachloroethylene, and benzene, toluene, ethylbenzene, and xylenes (BTEX). Vinyl chloride was detected in concentrations exceeding the upper quantification limit (400 ppb) in Wells G-2, G-7, and G-17. Chloroethane was also detected in a concentration exceeding the upper quantification limit (greater than 400 ppb) in Well G-2. This limit was

exceeded because the trap used to collect the samples became saturated with these two compounds before the fixed volume of sample (250 ml) was fully collected. Thus, to permit quantification of these compounds, a second round of samples was collected. To accomplish this, a smaller sample volume (100 ml) was selected for analysis to increase the upper quantification limit.

In August/September 1988, VOCs were detected in total concentrations ranging from 40 ppb to 432 ppb. For those wells which had also been sampled in July 1987, concentrations of VOCs were much lower. In some cases, however, (Wells G-8 and G-13), VOCs were detected in slightly higher concentrations in August/September 1988 than they were in July 1987, but in these instances, the results were in the low parts per billion range.

Although vinyl chloride and chloroethane were detected above the upper quantification limit in July 1987, these compounds were not detected in any of the wells sampled in August and September 1988.

4.4.3 Gas Pressure

Based on the results of the pressure testing of the gas wells conducted on June 15, 1987, and in the manner described in Section 3.3.4, it appears that landfill gases are not venting under pressure at the site. Thus, landfill gases do not appear to be migrating vertically under significant (detectable) pressure. Air bags attached to each well were observed to be empty after being attached to the gas wells for a period of 1 hour.

4.5 Contaminant Distribution and Migration

The results of the chemical characterization of landfill material and migration pathways (ground water and landfill gas) have been described in previous sections. This section provides a discussion of these results and their significance to the migration of contaminants from the site.

4.5.1 Contaminant Distribution

VOCs, base/neutral extractables, leachable metals, and PCBs were detected in some samples of landfill material. As detectable concentrations of these compounds varied appreciably, both laterally and vertically, a contaminant distribution pattern was not evident either within each class of compounds or among the four classes of compounds.

A distribution or pattern of the same compound(s) would be expected if a large quantity of a particular waste were deposited at a particular depth or in a particular area of the landfill. The results appear to be more consistent with the random deposition of industrial, commercial, and residential wastes. For example, a majority of the detected base/neutral extractables were polynuclear aromatic hydrocarbons (PAHs). As these compounds occur in coal tar, PAHs are frequently found in asphalt, and asphalt was noted in some samples of fill material. Thus, the PAHs detected may be attributable to this asphaltic material. Similarly, the occurrence of VOCs, metals, and PCBs in consumer goods and household waste (Ridgely 1982; Merck 1983) could at least partially account for the detected concentrations of these compounds.

VOCs, metals, and leachate indicator parameters were detected in some on-site monitoring wells. However, the concentrations and distribution of the VOCs do not suggest a plume or body of VOC-impacted water attributable to the landfill; rather, the VOC results are quite similar to regional water quality data. A 1986 study by Dvirka & Bartilucci reported that 26 percent of the surveyed monitoring wells (completed in the Upper Glacial Formation) in Nassau County contained between 10 and 50 ug/L of total VOCs, and 35 percent contained between nondetectable and 10 ug/L total VOCs. The VOCs detected included both halogenated and nonhalogenated VOCs. This study found that the VOCs occurring most frequently in water supply wells in Nassau County are trichloroethylene, tetrachloroethene, and 1,1,1-trichloroethane which were detected in 24, 22, and 17 percent, respectively, of all wells tested. Of these three compounds, tetrachloroethene was detected in an on-site monitoring well. However, it should be noted that the remaining compounds detected as part of the Interim RI were also detected in the Dvirka & Bartilucci study. The data in the study were from the Nassau County Department of Health files, dated October 1983 to September 1984 (Dvirka & Bartilucci, 1986). Although the Upper Glacial Formation is unsaturated in the vicinity of the Syosset Landfill, it is hydraulically connected to the Magothy aquifer. Similarly, the concentrations and distributions of metals do not suggest a landfill-derived plume of

contaminated ground water impacted by metals. A summary of the physical and chemical properties of all the hazardous chemicals found in the landfill materials and ground water is provided in Tables 23 and 24, for organic compounds and metals, respectively.

By contrast, the concentrations of leachate indicator parameters exhibited a fairly well-defined distribution or pattern. The highest concentrations were generally detected in wells completed underneath or downgradient of the landfill, where the largest impacts would be expected (see Figures 11 and 12). Similarly, wells completed on the upgradient side of the site exhibit leachate indicator parameters in concentrations that are near or within background levels (Isbister 1966).

The data from the monthly measurement of the gas monitoring wells indicate that the highest concentrations of gases were consistently found in monitoring wells located in the middle and in the southwestern corner of the site. VOCs were detected in gas monitoring wells, but as with the landfill and ground-water samples, no pattern or distribution was evident that would indicate a localized area of contamination within the landfill.

4.5.2 Contaminant Migration

The distribution of VOCs and metals in samples of landfill material and ground water are not indicative of a landfill-derived plume of ground-water contamination by VOCs and metals. PCBs and base/neutral extractable compounds that were detected in landfill samples were not detected in ground-water samples. These compounds would not be expected to impact ground-water quality, given their relatively high affinity for organic material (evidenced by octanol/water partition coefficients; see Callahan et al. 1979) and the abundance of organic material observed in landfill borings.

The distribution of leachate indicator parameters clearly indicates that ground water has been impacted by landfill leachate, as evidenced by elevated concentrations of dissolved solids, chloride, ammonia, alkalinity, and hardness. Further, the data suggest the potential for the

existence of a plume of leachate-impacted ground-water extending off-site in the direction of ground-water flow (roughly northeast).

The results of the landfill gas study indicate that landfill gas (predominantly methane) is migrating vertically upward, but not under detectable pressure. Horizontal migration of landfill gas was apparent only in the southwestern corner of the site.

5.0 CONCLUSIONS

Based on the results of the Interim RI, the following conclusions can be made. They are presented in three sections: On-Site Ground-Water Study Conclusions, Landfill Dimension Study Conclusions, and Subsurface Gas Study Conclusions.

5.1 On-Site Ground-Water Study

5.1.1 Hydrogeology

1. The dominant horizontal component of ground-water flow in both the shallow and deeper zones of the Magothy aquifer is in a northeasterly direction. The flow direction was observed to shift toward the north in the deeper zone of the Magothy aquifer and toward the east in the shallow zone of the Magothy aquifer.
2. Potentiometric surface maps prepared from water-level data collected from on-site and off-site wells depict the ground-water flow direction to be consistently in the same direction for the shallow zone (northeasterly) and the deeper zone (northerly) of the Magothy aquifer. Influences from nearby public supply or industrial wells were not observed.
3. The vertical component of ground-water flow is downward and appears to be more pronounced than the horizontal component of ground-water flow.

5.1.2 Water Quality

1. Ground-water quality underneath and downgradient of the landfill has been impacted by leachate as evidenced by leachate-indicator parameters (chloride, ammonia, alkalinity, hardness, total dissolved solids, specific conductance, and iron) detected in on-site ground-water monitoring wells.
2. The highest concentrations of leachate indicator parameters were detected in downgradient ground-water monitoring wells and wells completed beneath the landfill.
3. The relatively higher concentrations of leachate indicators detected in both shallow and deep downgradient ground-water monitoring wells suggest the existence of an off-site plume of leachate-impacted ground water.
4. Individual VOCs were detected in some on-site ground-water monitoring wells, but the distribution and concentrations were not consistent with a contiguous body (plume) of ground-water contamination with the landfill as a source.
5. PCBs were not detected in on-site ground-water monitoring wells; other classes of organic compounds (base/neutral and acid extractable compounds) were either not detected or were found in unquantifiable concentrations and/or in the method blanks.

5.2 Landfill Dimension Study

1. The extent and thickness of the landfill was found to be consistent with previous studies. The landfill consists of approximately 35 acres and appears to be divided into two lobes with the deepest lobe located in the western part of the site (with a maximum thickness of 91 ft), and the other lobe near the eastern part of the site (with a maximum thickness of 58 ft).
2. Detectable concentrations of VOCs, base/neutral extractable compounds, and PCBs were found in some fill samples; however, no consistent distribution was evident.

5.3 Subsurface Gas Study

1. Concentrations of methane have consistently been highest in gas monitoring wells located along the axis of the landfill and in the southwestern corner, and lower in wells located along the northern, eastern, and southern boundaries. (Frequently, concentrations of methane were undetectable, or nearly so, at these boundary areas.)
2. Landfill gases do not appear to be migrating vertically upwards under significant (detectable) pressure, and appear limited in the horizontal extent as just described.
3. Individual VOCs were detected in samples of landfill gas, but not in consistent concentrations or distributions.

6.0 SUMMARY

The results of the Interim (on-Site) RI have demonstrated that the on-site impacts to ground-water quality from the Syosset Landfill are limited to what appears to be a leachate plume which may extend off site. Recommendations for determining the nature and extent of the off-site portion of the leachate plume will be provided in the following section.

7.0 RECOMMENDATIONS

Based on the conclusions presented in this report, a plume of leachate impacted ground water may be emanating from the Syosset Landfill in a roughly northeastly (downgradient) direction. In addition, landfill gases were detected in significant concentrations at the southwestern boundary of the site. Therefore, in accordance with Sections 2.4 and 2.5.3 of the SOP, an off-site ground-water study (Off-Site RI) and an off-site landfill gas study are recommended. Work plans for conducting these investigations are currently being developed and will be submitted in accordance with the deliverables schedule presented in the SOP.

Since the on-site nature and extent of ground-water contamination was determined during the Interim RI, the purpose of the Off-Site Ground-Water study will be to define the off-site nature and extent of the plume of leachate impacted ground water (i.e., downgradient of the Syosset Landfill). Thus, the fate and transport (vertical and horizontal) of contaminants (i.e., leachate) will be determined during this study as will the rate of contaminant migration. The collection and analysis of water samples from off-site wells including public supply wells and Nassau County observation wells are included in the scope of work in the planned Off-Site RI. The results of the Off-Site Ground-Water Study will determine whether water quality degradation observed in public supply Well N4133 was related to the landfill.

The landfill gas study will be extended off-site southwest of the landfill in the vicinity of the Great Eastern Printing Company to determine whether landfill gases detected at the southwestern boundary of the site have migrated at significant concentrations off-site.

On-site remedial actions which will be presented in the planned On-Site FS combined with the planned Off-Site RI (and subsequent Off-Site FS) are intended to mitigate the potential exposure pathways listed below. Therefore, a baseline risk assessment may not be necessary.

In the absence of any remedial action, the following potential exposure pathways may exist:

- Direct contact and/or ingestion with fill materials if existing cover and site security is compromised.
- Ingestion of contaminated ground water in the event of contaminant migration to public water supply wells.

- Inhalation of landfill gases if existing cover and site security are compromised and/or landfill gases migrate uncontrolled.

Respectfully submitted,

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Table 1: Site Studies for the Syosset Landfill.

| Report | Author/Organization | Date | Content |
|--|--|-------------------------------|---|
| Vent Trench Monitoring | Town of Oyster Bay-DPW | 1981 | Continuous monitoring for methane in vent trench (no report submitted). |
| Methane Survey of the Syosset Landfill | Town of Oyster Bay-DPW | March 15 to April 3, 1981 | Gas samples collected for methane analysis from temporary monitoring points arranged in a grid pattern. |
| "Landfill Gas Migration" | Malcolm Pirnie, Inc. for for the Syosset Central School District | June 1982 | Report presents the findings of the Syosset Landfill and the Syosset Central School property studies. Methane has been found, but not other gases. Reports by NCDH and others are appended to this report. |
| Methane Survey of the Syosset Landfill | Town of Oyster Bay-DPW | January 3 to February 1, 1983 | Gas samples collected for methane analysis from temporary monitoring points arranged in a grid pattern. |
| "Investigation of Land-fill Impact on Ground-Water Quality" | ERM-Northeast for the Nassau County Dept. of Health (NCDH) | Jan. 1983 | Report on study of ground-water conditions at the Syosset Landfill. The investigation included the installation of seven on-site monitoring wells. The report concluded that ground-water quality was being impacted by landfill leachate. Elevated heavy metal concentrations are present in the leachate. |
| "Preliminary Remedial Action Master Plan (RAMP) for the Syosset Landfill." | C.C. Johnson, Inc./ CDM for the USEPA | May 1983 | RAMP report summarizes the previous work done at the Syosset Landfill and forms the basis for the RI/FS. |

Table 1: Site Studies for the Syosset Landfill.

| Report | Author/Organization | Date | Content |
|---|--|------------|--|
| "Capping and Closure of the Syosset Landfill" | Sidney B. Bowne and Son | Dec. 1983 | Conceptual design of cap and gas control measures. Includes data on five borings installed through the landfill. |
| Landfill Migration Study - Updating Supplement | Malcolm Pirnie, Inc. for the Syosset Central School District | Dec. 1983 | Review of data and issues on the Syosset Landfill since 1982 report. The report includes testing for non-methane compounds and evaluation of the gas intercept trench. |
| "Draft Environmental Impact Statement (DEIS) for the Proposed Construction of a 1500 Car Commuter Parking Facility at Landia (Syosset)" | Nassau County Planning Dept. | April 1984 | The DEIS summarizes previous work done at the site and assesses potential environmental impacts of the proposed Landia station. |
| Water-Quality Data (unpublished) | Nassau County | Continuous | NCDH has collected samples from nearby supply wells and the on-site ERM wells. |

Table 2. Summary of Data for Public Supply Wells Located Within 3 Miles of the Syosset Landfill,
Syosset, New York.

| Well | Water District | 1986 Pumpage (thousands of gallons) | Pump Capacity (gallons per minute) | Formation | Screen Interval (feet below land surface) | Distance from Center of the Site (miles) |
|---------|----------------|--|--|-----------|--|---|
| N0149 | Hicksville | 0 | 616 | Magothy | 131-151 | 1.8 |
| N0150 | Hicksville | 0 | 540 | Magothy | 122-142 | 1.8 |
| N0198 | Jericho | 321,172 | 1,100 | Magothy | 566-616 | 1.8 |
| N0199 | Jericho | 289,231 | 1,120 | Magothy | 544-600 | 1.9 |
| N0570 | Jericho | 277,837 | 1,000 | Magothy | ? | 2.2 |
| N2072 | Hicksville | 0 | 750 | Magothy | 138-159.25 | 1.6 |
| N3878 | Hicksville | 53,947 | 1,200 | Magothy | 375-428 | 2.4 |
| N3953 | Hicksville | 0 | 1,200 | Magothy | 169-213 | 2.4 |
| | | | | | 370.75-418.75 | |
| N4095 | Plainview | 284,203 | 1,200 | Magothy | 440-490 | 2.9 |
| N4096 | Plainview | 55,580 | 1,200 | Magothy | 444-495 | 2.9 |
| N4097 | Plainview | 68,662 | 1,200 | Magothy | 413-463 | 1.9 |
| N4133 | Jericho | 0 | 1,000 | Magothy | 400-450 | 0.19 * |
| N4245 | Jericho | 369,887 | 1,194 | Magothy | 525-565 | 1.4 |
| N4246 a | Jericho | 0 | 1,140 | Magothy | 403-453 | 0.48 * |
| N6076 | Plainview | 81,885 | 1,200 | Magothy | 191.83-253.25 | 1.9 |
| N6077 | Plainview | 141,283 | 400 | Magothy | 398-459.58 | 1.9 |
| N6092 | Jericho | 252,585 | 1,200 | Magothy | 561-631 | 2.9 |
| N6093 | Jericho | 90,524 | 1,200 | Magothy | 546-606 | 2.9 |
| N6190 b | Hicksville | 0 | 1,200 | Magothy | 550-600 | 0.77 * |
| N6191 b | Hicksville | 0 | 1,200 | Magothy | 390-451 | 0.80 * |
| N6192 | Hicksville | 53,505 | 1,400 | Magothy | 575.16-626.58 | 3.0 |
| N6193 | Hicksville | 0 | 1,400 | Magothy | 396.33-456.41 | 2.94 |
| N6580 | Plainview | 306,029 | 1,200 | Magothy | 418.75-495.75 | 2.1 |
| N6651 | Jericho | 355,344 | 1,200 | Magothy | 560-610 | 1.3 |
| N7030 | Jericho | 114,101 | 1,230 | Magothy | 480-530 | 2.8 |

Data obtained from the NYSDEC offices, SUNY at Stony Brook, New York.

* Measured from the nearest boundary of the landfill.

a Well is reportedly no longer in service due to detection of volatile organic compounds and water main break.

b Well is reportedly used on a part-time basis during periods of high demand.

-- Data not available.

Table 2. Summary of Data for Public Supply Wells Located Within 3 Miles of the Syosset Landfill, Syosset, New York.

| Well | Water District | 1986 Pumpage (thousands of gallons) | Pump Capacity (gallons per minute) | Formation | Screen Interval (feet below land surface) | Distance from Center of the Site (miles) |
|--------|----------------|--|---------------------------------------|-----------|---|---|
| N7526 | Plainview | 61,967 | 1,280 | Magothy | 570-585.5 600.75-611.16 621.19-641.63 661.83-687.75 687.75-690.75 | 2.68 |
| N7562 | Hicksville | 372,653 | 1,400 | Magothy | 458-519 | 1.7 |
| N7772 | Jericho | 221,156 | 1,220 | Magothy | 502.75-562.75 | 2.8 |
| N7773 | Jericho | 161,543 | 1,180 | Magothy | 416.08-476.08 | 2.8 |
| N7781 | Jericho | 317,129 | 1,240 | Magothy | 394-454 | 1.5 |
| N8043 | Jericho | 432,549 | 1,200 | Magothy | 515-688.42 | 1.9 |
| N8249 | Hicksville | 206,378 | 1,400 | Magothy | 299.66-389-58 | 1.7 |
| N8355 | Jericho | 100,463 | 1,200 | Magothy | 520-570 | 1.3 |
| N8778 | Hicksville | 87,657 | 1,400 | Magothy | 529-590 | 2.6 |
| N8779 | Hicksville | 221,640 | 1,400 | Magothy | 524.25-585 | 2.7 |
| N9180 | Hicksville | 346,533 | 1,400 | Magothy | 545-576 598-630 | 2.9 |
| N9463 | Hicksville | 285,657 | 1,200 | Magothy | 560-595 603-638 | 2.5 |
| N9488 | Hicksville | 136,251 | 1,380 | Magothy | 515-575 | 1.6 |
| N10208 | Hicksville | 130,848 | 1,750 | Magothy | 572-624 634-644 | 2.7 |
| N10555 | Hicksville | 0 | -- | Magothy | 608-693 | 2.4 |

Data obtained from the NYSDEC offices, SUNY at Stony Brook, New York.

* Measured from the nearest boundary of the landfill.

a Well is reportedly no longer in service due to detection of volatile organic compounds and water main break.

b Well is reportedly used on a part-time basis during periods of high demand.

-- Data not available.

Table 3. Summary of Data for Industrial Wells Located Within 1 Mile of the Syosset Landfill, Syosset, New York.

| Well | Owner | 1986 Pumpage (thousands of gallons) | Pump Capacity (gallons per minute) | Formation | Screen Interval (feet below land surface) | Distance from the nearest Boundary of the Syosset Landfill (miles) | Reported Use |
|-------|-------------------------------|--|--|-----------|--|--|------------------|
| N3569 | Cerro Wire & Cable Corp. | 53,353 | 1,000 | Magothy | 353-402 | 0.08 | General |
| N3834 | Geo Spohrer | * | 4 | Magothy | 189-193 | 0.53 | Shop |
| N3838 | Fairchild Camera & Instrument | * | 50 | Magothy | 153-163 | 0.31 | Domestic |
| N3850 | Fairchild Camera & Instrument | * | 750 | Magothy | 400-440 | 0.25 | Fire Protection |
| N3860 | Fairchild Camera & Instrument | * | 750 | Magothy | 400-440 | 0.31 | Fire Protection |
| N3874 | Fairchild Camera & Instrument | * | 300 | Magothy | 310-330 | 0.26 | Industrial |
| N5354 | Geo Spohrer | * | 16 | Magothy | 259-264 | 0.45 | Bathroom |
| N5901 | Certified Redi-Mix Co., Inc. | * | 45 | Magothy | 137-148 | 0.72 | Concrete Mixing |
| N6531 | Riverside Plastics Corp. | * | 40 | Magothy | 114-119 | 0.65 | Air Conditioning |
| N6741 | Cerro Wire & Cable Corp. | 115,303 | 1,000 | Magothy | 374-424 | 0.11 | General |
| N7052 | Syosset Hospital | * | 330 | Magothy | 223-253 | 0.68 | Air Conditioning |
| N8436 | Riverside Plastics Corp. | * | 300 | Magothy | 159-179 | 0.84 | * |
| N8517 | Great Atlantic Realty Co. | * | 130 | Magothy | 248-273 | 0.78 | Cooling |
| N9842 | Reckson Associates | 85,302 | 350 | Magothy | 262-297 | 0.36 | * |

Data obtained from the NYSDEC offices, SUNY at Stony Brook, New York.

Wells included in this table have withdrawals greater than 45 gallons per minute.

* Data not reported to the NYSDEC.

Table 4. Summary of Construction Details for On-Site Monitoring Wells Installed at the Syosset Landfill, Syosset, New York.

| Well Designation | Completion Date | Well Diameter (inches) | Total Depth (feet below land surface) | Screen Setting (feet below land surface) | Interval Gravel Packed (feet below land surface) | Interval Sealed with Bentonite Pellets (feet below land surface) | Interval Sealed with Bentonite Slurry (feet below land surface) | Height of Measuring Point a (relative to land surface) | Elevation of Measuring Point (feet above mean sea level) d | Well Casing & Screen Material |
|------------------|-----------------|------------------------|---------------------------------------|--|--|--|---|--|--|-------------------------------|
| SY-1 * | 10/19/82 | 2 | 135 | 125 - 135 | 35 - 135 b | 34 - 35 | 8 - 34 c | -0.15 | 194.52 | Black Steel |
| SY-1D | 2/2/88 | 4 | 218 | 182 - 192 | 179 - 218 | 177 - 179 | 2 - 177 | +2.31 | 197.36 | PVC |
| SY-2R | 2/12/88 | 4 | 150 | 115 - 125 | 112 - 150 | 110 - 112 | 2 - 110 | +1.95 | 187.48 | PVC |
| SY-2D | 2/9/88 | 4 | 215 | 190 - 200 | 187 - 215 | 185 - 187 | 2 - 185 | +2.18 | 186.57 | PVC |
| SY-3 * | 10/20/82 | 2 | 145 | 135 - 145 | 47 - 145 b | 45 - 47 | 4 - 45 c | -0.50 | 191.38 | Black Steel |
| SY-3D | 2/25/88 | 3 | 240 | 189 - 199 | 184 - 240 | 181 - 184 | 2 - 181 | | 194.74 | PVC |
| SY-4 * | 10/20/82 | 2 | 153 | 143 - 153 | 57 - 153 b | 54 - 57 | 4 - 54 c | -0.20 | 193.32 | Black Steel |
| SY-5 * | 10/20/82 | 2.5 | 135 | 125 - 135 | 46 - 135 b | 44 - 46 | 5 - 44 c | +4.20 | 188.07 | Galvanized Steel |
| SY-6 * | 10/19/82 | 2 | 145 | 135 - 145 | 31 - 145 b | 28 - 31 | 5 - 28 c | -0.10 | 185.85 | Black Steel |
| SY-6D | 3/9/88 | 4 | 215 | 195 - 205 | 192 - 215 | 190 - 192 | 3 - 192 | -0.30 | 185.60 | PVC |
| SY-7 * | 10/21/82 | 2 | 145 | 135 - 145 | 52 - 145 b | 49 - 52 | 5 - 49 c | -0.25 | 199.63 | Black Steel |
| SY-8 | 12/19/87 | 4 | 142 | 127 - 137 | 125 - 142 | 122 - 125 | 2 - 122 | +2.25 | 195.84 | PVC |
| SY-9 | 1/29/88 | 4 | 140 | 110 - 120 | 107 - 140 | 105 - 107 | 2 - 105 | -0.70 | 199.41 | PVC |
| W-3 | 11/10/87 | 2 | 120 | 105 - 115 | 102 - 120 | 100 - 102 | 2 - 100 | +2.63 | 191.18 | PVC |
| W-4 | 11/18/87 | 2 | 120 | 104 - 114 | 102 - 120 | 100 - 102 | 2 - 100 | +2.56 | 192.82 | PVC |

a The measuring point of each well is the top of the well casing.

b It appears that this interval consists of formation collapse.

c Information not available as to whether grout or backfill (drill cuttings) was used to fill the annular space in this interval.

d Survey performed to USGS datum.

* Well installed during the ERM-Northeast site investigation.

Table 5. Summary of Survey Data, Syosset Landfill, Syosset, New York.

| Well | Measuring-Point Elevation (ft, mean sea level) | New York State Plane Coordinate North | New York State Plane Coordinate East |
|-------|--|---|--|
| SY-1 | 194.52 | 11068.0791 | 10504.4816 |
| SY-1D | 197.36 | 11050.8325 | 10517.0545 |
| SY-2R | 187.48 | 11759.3955 | 9879.5309 |
| SY-2D | 186.57 | 11741.1625 | 9907.5274 |
| SY-3 | 191.38 | 12063.4852 | 9445.5045 |
| SY-3D | 194.74 | 12071.7393 | 9430.0940 |
| SY-4 | 193.32 | 11322.9674 | 9036.3191 |
| SY-5 | 188.07 | 11092.1156 | 9724.3137 |
| SY-6 | 185.85 | 10562.8613 | 9752.0626 |
| SY-6D | 185.60 | 10586.9318 | 9724.4322 |
| SY-7 | 199.63 | 10232.7810 | 10476.6334 |
| SY-8 | 195.84 | 11997.8152 | 8829.4688 |
| SY-9 | 199.41 | 10646.5625 | 10556.8923 |
| W-3 | 191.18 | 11839.2226 | 9347.4941 |
| W-4 | 192.82 | 11013.8951 | 10018.4313 |

Survey performed by Lockwood, Kessler, & Bartlett, Inc., Syosset, New York.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

| -----June 7, 1987----- | | | |
|------------------------|--|--|---|
| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
| <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | -- | -- |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 108.00 | 83.38 |
| SY-4 * | 193.32 | 109.30 | 84.02 |
| SY-5 * | 188.07 | 94.35 | 93.72 |
| SY-6 * | 185.85 | 102.10 | 83.75 |
| SY-7 * | 199.63 | 115.77 | 83.86 |
| SY-8 a | 195.84 | -- | -- |
| SY-9 a | 199.41 | -- | -- |
| W-3 a | 191.18 | -- | -- |
| W-4 a | 192.82 | -- | -- |
| <u>Deep Wells</u> | | | |
| SY-1D a | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----June 15, 1987-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------|--|--|---|
| <hr/> | | | |
| <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 111.35 | 83.17 |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 108.09 | 83.29 |
| SY-4 * | 193.32 | 109.41 | 83.91 |
| SY-5 * | 188.07 | 94.37 | 93.70 |
| SY-6 * | 185.85 | 102.15 | 83.70 |
| SY-7 * | 199.63 | 115.70 | 83.93 |
| SY-8 a | 195.84 | -- | -- |
| SY-9 a | 199.41 | -- | -- |
| W-3 a | 191.18 | -- | -- |
| W-4 a | 192.82 | -- | -- |
| <hr/> | | | |
| <u>Deep Wells</u> | | | |
| SY-1D a | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

| -----June 23, 1987----- | | | |
|-------------------------|--|--|---|
| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
| <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 111.37 | 83.15 |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 108.25 | 83.13 |
| SY-4 * | 193.32 | 109.65 | 83.67 |
| SY-5 * | 188.07 | 94.51 | 93.56 |
| SY-6 * | 185.85 | 102.28 | 83.57 |
| SY-7 * | 199.63 | 115.79 | 83.84 |
| SY-8 a | 195.84 | -- | -- |
| SY-9 a | 199.41 | -- | -- |
| W-3 a | 191.18 | -- | -- |
| W-4 a | 192.82 | -- | -- |
| <u>Deep Wells</u> | | | |
| SY-1D a | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----August 21, 1987-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------------|--|--|---|
| <hr/> <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 110.60 | 83.92 |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 108.86 | 82.52 |
| SY-4 * | 193.32 | 110.03 | 83.29 |
| SY-5 * | 188.07 | 95.12 | 92.95 |
| SY-6 * | 185.85 | 102.45 | 83.40 |
| SY-7 * | 199.63 | 116.25 | 83.38 |
| SY-8 a | 195.84 | -- | -- |
| SY-9 a | 199.41 | -- | -- |
| W-3 a | 191.18 | -- | -- |
| W-4 a | 192.82 | -- | -- |
| <hr/> <u>Deep Wells</u> | | | |
| SY-1D a | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----September 8, 1987-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------|--|--|---|
| <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 112.12 | 82.40 |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 109.07 | 82.31 |
| SY-4 * | 193.32 | 110.10 | 83.22 |
| SY-5 * c | 188.07 | -- | -- |
| SY-6 * | 185.85 | 103.35 | 82.50 |
| SY-7 * | 199.63 | 116.38 | 83.25 |
| SY-8 a | 195.84 | -- | -- |
| SY-9 a | 199.41 | -- | -- |
| W-3 a | 191.18 | -- | -- |
| W-4 a | 192.82 | -- | -- |
| <u>Deep Wells</u> | | | |
| SY-1D a | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----October 15, 1987-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------------|--|--|---|
| <hr/> <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 112.80 | 81.72 |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 109.47 | 81.91 |
| SY-4 * | 193.32 | 110.93 | 82.39 |
| SY-5 * | 188.07 | -- | -- |
| SY-6 * | 185.85 | 108.62 | 77.23 |
| SY-7 * | 199.63 | 117.22 | 82.41 |
| SY-8 a | 195.84 | -- | -- |
| SY-9 a | 199.41 | -- | -- |
| W-3 a | 191.18 | -- | -- |
| W-4 a | 192.82 | -- | -- |
| <hr/> <u>Deep Wells</u> | | | |
| SY-1D a | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

| -----December 3, 1987----- | | | |
|----------------------------|--|--|---|
| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
| <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | -- | -- |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 109.86 | 81.52 |
| SY-4 * | 193.32 | 110.02 | 83.30 |
| SY-5 * | 188.07 | -- | -- |
| SY-6 * | 185.85 | 103.92 | 81.93 |
| SY-7 * | 199.63 | 110.90 | 88.73 |
| SY-8 a | 195.84 | -- | -- |
| SY-9 b | 199.41 | -- | -- |
| W-3 | 191.18 | 109.74 | 81.44 |
| W-4 | 192.82 | 111.39 | 81.43 |
| <u>Deep Wells</u> | | | |
| SY-1D a | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

| -----December 14, 1987----- | | | |
|-----------------------------|--|--|---|
| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
| <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 110.92 | 83.60 |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 109.91 | 81.47 |
| SY-4 * | 193.32 | 110.08 | 83.24 |
| SY-5 * | 188.07 | -- | -- |
| SY-6 * | 185.85 | 104.00 | 81.85 |
| SY-7 * | 199.63 | 110.93 | 88.70 |
| SY-8 a | 195.84 | -- | -- |
| SY-9 b | 199.41 | -- | -- |
| W-3 | 191.18 | 109.74 | 81.44 |
| W-4 | 192.82 | 111.42 | 81.40 |
| <u>Deep Wells</u> | | | |
| SY-1D a | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----December 23, 1987-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------|--|--|---|
| <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 110.87 | 83.65 |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 109.89 | 81.49 |
| SY-4 * | 193.32 | 110.02 | 83.30 |
| SY-5 * | 188.07 | -- | -- |
| SY-6 * | 185.85 | 103.97 | 81.88 |
| SY-7 * | 199.63 | 110.89 | 88.74 |
| SY-8 | 195.84 | -- | -- |
| SY-9 b | 199.41 | -- | -- |
| W-3 | 191.18 | 109.77 | 81.41 |
| W-4 f | 192.82 | 111.39 | 81.43 |
| <u>Deep Wells</u> | | | |
| SY-1D a | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----January 5, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------------------|--|--|---|
| <hr/> Shallow Wells <hr/> | | | |
| SY-1 * c | 194.52 | -- | -- |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 110.22 | 81.16 |
| SY-4 * | 193.32 | 111.22 | 82.10 |
| SY-5 * | 188.07 | 106.78 | 81.29 |
| SY-6 * | 185.85 | 104.49 | 81.36 |
| SY-7 * | 199.63 | 118.16 | 81.47 |
| SY-8 | 195.84 | 114.16 | 81.68 |
| SY-9 b | 199.41 | -- | -- |
| W-3 | 191.18 | 110.14 | 81.04 |
| W-4 | 192.82 | 111.71 | 81.11 |
| <hr/> Deep Wells <hr/> | | | |
| SY-1D b | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----January 13, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------------|--|--|---|
| <hr/> <u>Shallow Wells</u> | | | |
| SY-1 * c | 194.52 | -- | -- |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 110.19 | 81.19 |
| SY-4 * | 193.32 | 111.59 | 81.73 |
| SY-5 * | 188.07 | 106.78 | 81.29 |
| SY-6 * | 185.85 | 104.35 | 81.50 |
| SY-7 * c | 199.63 | -- | -- |
| SY-8 | 195.84 | -- | -- |
| SY-9 b | 199.41 | -- | -- |
| W-3 | 191.18 | 110.15 | 81.03 |
| W-4 | 192.82 | 111.58 | 81.24 |
| <hr/> <u>Deep Wells</u> | | | |
| SY-1D b | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----January 19, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------|--|--|---|
| <u>Shallow Wells</u> | | | |
| SY-1 * c | 194.52 | -- | -- |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 110.34 | 81.04 |
| SY-4 * | 193.32 | 111.07 | 82.25 |
| SY-5 * | 188.07 | 106.79 | 81.28 |
| SY-6 * | 185.85 | 103.95 | 81.90 |
| SY-7 * c | 199.63 | -- | -- |
| SY-8 | 195.84 | 114.32 | 81.52 |
| SY-9 b | 199.41 | -- | -- |
| W-3 | 191.18 | 110.27 | 80.91 |
| W-4 | 192.82 | 111.84 | 80.98 |
| <u>Deep Wells</u> | | | |
| SY-1D b | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----January 28, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------------------|--|--|---|
| <hr/> Shallow Wells <hr/> | | | |
| SY-1 * | 194.52 | -- | -- |
| SY-2R a | 187.48 | -- | -- |
| SY-3 * | 191.38 | 110.20 | 81.18 |
| SY-4 * | 193.32 | 111.17 | 82.15 |
| SY-5 * | 188.07 | 106.78 | 81.29 |
| SY-6 * | 185.85 | 104.06 | 81.79 |
| SY-7 * | 199.63 | 110.91 | 88.72 |
| SY-8 | 195.84 | 114.28 | 81.56 |
| SY-9 b | 199.41 | -- | -- |
| W-3 | 191.18 | 110.21 | 80.97 |
| W-4 | 192.82 | 111.80 | 81.02 |
| <hr/> Deep Wells <hr/> | | | |
| SY-1D b | 197.36 | -- | -- |
| SY-2D a | 186.57 | -- | -- |
| SY-3D b | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

| -----February 11, 1988----- | | | |
|-----------------------------|--|--|---|
| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
| <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 113.75 | 80.77 |
| SY-2R b | 187.48 | -- | -- |
| SY-3 * | 191.38 | 110.45 | 80.93 |
| SY-4 * | 193.32 | 111.86 | 81.46 |
| SY-5 * | 188.07 | -- | -- |
| SY-6 * | 185.85 | 104.97 | 80.88 |
| SY-7 * | 199.63 | 118.44 | 81.19 |
| SY-8 | 195.84 | -- | -- |
| SY-9 | 199.41 | 116.94 | 82.47 |
| W-3 | 191.18 | 110.50 | 80.68 |
| W-4 | 192.82 | 111.94 | 80.88 |
| <u>Deep Wells</u> | | | |
| SY-1D | 197.36 | 116.58 | 80.78 |
| SY-2D d | 186.57 | -- | -- |
| SY-3D a | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----February 26, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------------|--|--|---|
| <hr/> <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 113.98 | 80.54 |
| SY-2R | 187.48 | 114.57 | 72.91 |
| SY-3 * | 191.38 | -- | -- |
| SY-4 * | 193.32 | 111.78 | 81.54 |
| SY-5 * | 188.07 | 107.00 | 81.07 |
| SY-6 * | 185.85 | 104.86 | 80.99 |
| SY-7 * | 199.63 | 118.54 | 81.09 |
| SY-8 | 195.84 | 114.52 | 81.32 |
| SY-9 | 199.41 | 117.58 | 81.83 |
| W-3 | 191.18 | 110.39 | 80.79 |
| W-4 | 192.82 | 112.00 | 80.82 |
| <hr/> <u>Deep Wells</u> | | | |
| SY-1D | 197.36 | 116.59 | 80.77 |
| SY-2D | 186.57 | 105.85 | 80.72 |
| SY-3D f | 194.74 | -- | -- |
| SY-6D a | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

| -----March 9, 1988----- | | | |
|-------------------------|--|--|---|
| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
| <u>Shallow Wells</u> | | | |
| SY-1 | 194.52 | -- | -- |
| SY-2R e | 187.48 | 113.33 | 74.15 |
| SY-3 | 191.38 | -- | -- |
| SY-4 | 193.32 | 111.84 | 81.48 |
| SY-5 | 188.07 | 107.10 | 80.97 |
| SY-6 | 185.85 | 104.81 | 81.04 |
| SY-7 | 199.63 | 118.52 | 81.11 |
| SY-8 | 195.84 | 114.55 | 81.29 |
| SY-9 | 199.41 | 117.65 | 81.76 |
| W-3 | 191.18 | 110.08 | 81.10 |
| W-4 | 192.82 | 112.00 | 80.82 |
| <u>Deep Wells</u> | | | |
| SY-1D | 197.36 | 116.52 | 80.84 |
| SY-2D | 186.57 | 105.72 | 80.85 |
| SY-3D f | 194.74 | -- | -- |
| SY-6D g | 185.60 | -- | -- |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----April 1, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------|--|--|---|
| <u>Shallow Wells</u> | | | |
| SY-1 | 194.52 | -- | -- |
| SY-2R h | 187.48 | 107.00 | 80.48 |
| SY-3 | 191.38 | 110.75 | 80.63 |
| SY-4 | 193.32 | 111.91 | 81.41 |
| SY-5 | 188.07 | 107.13 | 80.94 |
| SY-6 | 185.85 | 105.17 | 80.68 |
| SY-7 | 199.63 | 118.77 | 80.86 |
| SY-8 | 195.84 | 114.76 | 81.08 |
| SY-9 i | 199.41 | 117.91 | 81.50 |
| W-3 | 191.18 | 110.49 | 80.69 |
| W-4 | 192.82 | -- | -- |
| <u>Deep Wells</u> | | | |
| SY-1D h | 197.36 | 116.96 | 80.40 |
| SY-2D h | 186.57 | 106.16 | 80.41 |
| SY-3D i | 194.74 | 115.11 | 79.63 |
| SY-6D | 185.60 | 105.17 | 80.43 |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----April 11, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------------|--|--|---|
| <hr/> <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 114.45 | 80.07 |
| SY-2R | 187.48 | 107.03 | 80.45 |
| SY-3 * | 191.38 | 110.84 | 80.54 |
| SY-4 * | 193.32 | 112.24 | 81.08 |
| SY-5 * | 188.07 | 107.40 | 80.67 |
| SY-6 * | 185.85 | 105.20 | 80.65 |
| SY-7 * | 199.63 | 118.96 | 80.67 |
| SY-8 | 195.84 | 114.88 | 80.96 |
| SY-9 | 199.41 | 118.06 | 81.35 |
| W-3 | 191.18 | 110.61 | 80.57 |
| W-4 | 192.82 | 112.36 | 80.46 |
| <hr/> <u>Deep Wells</u> | | | |
| SY-1D | 197.36 | 117.07 | 80.29 |
| SY-2D | 186.57 | 106.29 | 80.28 |
| SY-3D | 194.74 | -- | -- |
| SY-6D | 185.60 | 105.27 | 80.33 |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

| -----April 22, 1988----- | | | |
|--------------------------|--|--|---|
| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
| <u>Shallow Wells</u> | | | |
| SY-1 * | 194.52 | 113.94 | 80.58 |
| SY-2R | 187.48 | 107.45 | 80.03 |
| SY-3 * | 191.38 | 110.98 | 80.40 |
| SY-4 * | 193.32 | 112.55 | 80.77 |
| SY-5 * | 188.07 | 107.50 | 80.57 |
| SY-6 * | 185.85 | 105.25 | 80.60 |
| SY-7 * | 199.63 | 118.95 | 80.68 |
| SY-8 | 195.84 | 115.00 | 80.84 |
| SY-9 | 199.41 | 118.20 | 81.21 |
| W-3 | 191.18 | 110.80 | 80.38 |
| W-4 | 192.82 | 112.20 | 80.62 |
| <u>Deep Wells</u> | | | |
| SY-1D | 197.36 | 117.10 | 80.26 |
| SY-2D | 186.57 | 106.47 | 80.10 |
| SY-3D | 194.74 | 115.00 | 79.74 |
| SY-6D | 185.60 | 105.40 | 80.20 |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----May 5, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------------|--|--|---|
| <hr/> <u>Shallow Wells</u> | | | |
| SY-1 | 194.52 | 114.88 | 79.64 |
| SY-2R | 187.48 | 106.47 | 81.01 |
| SY-3 | 191.38 | 109.77 | 81.61 |
| SY-4 | 193.32 | 112.16 | 81.16 |
| SY-5 | 188.07 | 107.62 | 80.45 |
| SY-6 | 185.85 | 104.42 | 81.43 |
| SY-7 | 199.63 | 118.30 | 81.33 |
| SY-8 | 195.84 | 115.08 | 80.76 |
| SY-9 | 199.41 | 118.23 | 81.18 |
| W-3 | 191.18 | 110.83 | 80.35 |
| W-4 | 192.82 | -- | -- |
| <hr/> <u>Deep Wells</u> | | | |
| SY-1D | 197.36 | 117.27 | 80.09 |
| SY-2D | 186.57 | 107.21 | 79.36 |
| SY-3D | 194.74 | 115.00 | 79.74 |
| SY-6D | 185.60 | 105.46 | 80.14 |

NOTE: See page 25 for footnotes.

NOTE: All wells fully developed or redeveloped by April 12, 1988.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----June 15, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------|--|--|---|
| <u>Shallow Wells</u> | | | |
| SY-1 | 194.52 | 113.73 | 80.79 |
| SY-2R | 187.48 | 107.57 | 79.91 |
| SY-3 | 191.38 | 111.20 | 80.18 |
| SY-4 | 193.32 | 112.35 | 80.97 |
| SY-5 | 188.07 | 107.60 | 80.47 |
| SY-6 | 185.85 | 105.59 | 80.26 |
| SY-7 | 199.63 | 117.20 | 82.43 |
| SY-8 | 195.84 | 115.01 | 80.83 |
| SY-9 | 199.41 | 118.42 | 80.99 |
| W-3 | 191.18 | 111.15 | 80.03 |
| W-4 | 192.82 | 112.61 | 80.21 |
| <u>Deep Wells</u> | | | |
| SY-1D | 197.36 | 117.55 | 79.81 |
| SY-2D | 186.57 | 106.70 | 79.87 |
| SY-3D | 194.74 | 115.24 | 79.50 |
| SY-6D | 185.60 | 105.62 | 79.98 |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----August 18, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------|--|--|---|
| <u>Shallow Wells</u> | | | |
| SY-1 | 194.52 | 113.50 | 81.02 |
| SY-2R | 187.48 | 108.00 | 79.48 |
| SY-3 | 191.38 | 111.65 | 79.73 |
| SY-4 | 193.32 | 113.00 | 80.32 |
| SY-5 | 188.07 | 108.15 | 79.92 |
| SY-6 | 185.85 | 106.00 | 79.85 |
| SY-7 | 199.63 | 119.55 | 80.08 |
| SY-8 | 195.84 | 116.50 | 79.34 |
| SY-9 | 199.41 | Dry | -- |
| W-3 | 191.18 | 110.48 | 80.70 |
| W-4 | 192.82 | 112.75 | 80.07 |
| <u>Deep Wells</u> | | | |
| SY-1D | 197.36 | 118.37 | 78.99 |
| SY-2D | 186.57 | 107.28 | 79.29 |
| SY-3D | 194.74 | 116.00 | 78.74 |
| SY-6D | 185.60 | 106.20 | 79.40 |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-----September 23, 1988-----

| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
|----------------------------|--|--|---|
| <hr/> <u>Shallow Wells</u> | | | |
| SY-1 | 194.52 | 111.95 j | 82.57 |
| SY-2R | 187.48 | 108.22 | 79.26 |
| SY-3 | 191.38 | 112.05 | 79.33 |
| SY-4 | 193.32 | 112.69 | 80.63 |
| SY-5 | 188.07 | -- | -- |
| SY-6 | 185.85 | 105.43 | 80.42 |
| SY-7 | 199.63 | 119.78 j | 79.85 |
| SY-8 | 195.84 | 116.12 | 79.72 |
| SY-9 | 199.41 | -- | -- |
| W-3 | 191.18 | 111.89 | 79.29 |
| W-4 | 192.82 | 113.65 | 79.17 |
| <hr/> <u>Deep Wells</u> | | | |
| SY-1D | 197.36 | 118.29 | 79.07 |
| SY-2D | 186.57 | 107.46 | 79.11 |
| SY-3D | 194.74 | 116.24 | 78.50 |
| SY-6D | 185.60 | 106.48 | 79.12 |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

| -----October 27, 1988----- | | | |
|----------------------------|--|--|---|
| Well | Elevation of Measuring Point (feet above sea level) | Depth to Water (feet below measuring point) | Water-Level Elevation (feet above sea level) |
| <u>Shallow Wells</u> | | | |
| SY-1 | 194.52 | 115.79 | 78.73 |
| SY-2R | 187.48 | 108.63 | 78.85 |
| SY-3 | 191.38 | 112.42 | 78.96 |
| SY-4 | 193.32 | 113.81 | 79.51 |
| SY-5 | 188.07 | 108.85 | 79.22 |
| SY-6 | 185.85 | 106.65 | 79.20 |
| SY-7 | 199.63 | 120.21 | 79.42 |
| SY-8 | 195.84 | 116.46 | 79.38 |
| SY-9 | 199.41 | Dry | -- |
| W-3 | 191.18 | 112.31 | 78.87 |
| W-4 | 192.82 | 113.88 | 78.94 |
| <u>Deep Wells</u> | | | |
| SY-1D | 197.36 | 118.52 | 78.84 |
| SY-2D | 186.57 | k | -- |
| SY-3D | 194.74 | 116.58 | 78.16 |
| SY-6D | 185.60 | 106.58 | 79.02 |

NOTE: See page 25 for footnotes.

Table 6. Summary of Water-Level Elevation Data Collected from Monitoring Wells, June 1987 to October 1988, Syosset Landfill, Syosset, New York.

-
- * Well installed during 1983 ERM-Northeast Site Investigation.
 - a Well drilling has not yet begun.
 - b Well installation in progress.
 - c Not accessible.
 - d Well not developed.
 - e Well needs to be redeveloped.
 - f Well being developed on date of measurement.
 - g Well installed on date of measurement.
 - h Well was redeveloped on April 8, 1988.
 - i Well was redeveloped on April 12, 1988.
 - j Measured in feet below grade because measuring point was not clearly marked. Depth to water and water-level elevation were adjusted using the height of measuring point below or above the grade.
 - k Water-level measurement could not be made because protective casing and well stickup were knocked over.

Table 7. Summary of Construction Details for Gas Monitoring Wells, Syosset Landfill, Syosset, New York.

| Well | Date Installed | Diameter of Well (inches) | Total Depth of Boring (feet below land surface) | Depth to Landfill Material (feet below land surface) | Screen Interval (feet below land surface) | Sand Packed Interval (feet below land surface) | Grouted Interval (feet below land surface) | Casing Stick Up (feet above land surface) |
|--------|-------------------|---------------------------------|--|--|--|---|---|--|
| G-1 * | 4/20/87 | 1 | 4.3 | -- | 1.2 - 4.2 | 1.0 - 4.3 | 0 - 1.0 | 2.00 |
| G-2 | 4/29/87 | 1 | 4.1 | 3 | 2.4 - 4.0 | 1.2 - 4.1 | 0 - 1.2 | 1.50 |
| G-3 | 4/29/87 | 1 | 4.6 | -- | 2.4 - 4.5 | 1.2 - 4.6 | 0 - 1.2 | 1.00 |
| G-4 | 4/21/87 | 1 | 4.6 | -- | 1.5 - 4.5 | 1.2 - 4.6 | 0 - 1.2 | 1.63 |
| G-5 * | 4/22/87 | 1 | 5.3 | -- | 2.2 - 5.2 | 1.2 - 5.3 | 0 - 1.2 | 0.95 |
| G-6 | 4/22/87 | 1 | 4.7 | <4.7 | 1.6 - 4.6 | 1.2 - 4.7 | 0 - 1.2 | 1.50 |
| G-7 | 4/22/87 | 1 | 4.7 | -- | 1.6 - 4.6 | 1.2 - 4.7 | 0 - 1.2 | 1.53 |
| G-8 | 4/23/87 | 1 | 5.1 | -- | 2.0 - 5.0 | 1.2 - 5.1 | 0 - 1.2 | 1.15 |
| G-9 * | 4/23/87 | 1 | 5.0 | -- | 1.9 - 4.9 | 1.2 - 5.0 | 0 - 1.2 | 1.25 |
| G-10 | 4/23/87 | 1 | 4.5 | 3 | 1.4 - 4.4 | 1.0 - 4.5 | 0 - 1.0 | 1.75 |
| G-11 | 4/23/87 | 1 | 4.0 | -- | 1.4 - 4.0 | 1.0 - 4.0 | 0 - 1.0 | 1.55 |
| G-12 * | 4/24/87 | 1 | 4.2 | -- | 1.2 - 4.2 | 1.0 - 4.2 | 0 - 1.0 | 1.60 |
| G-13 | 4/24/87 | 1 | 4.6 | -- | 1.6 - 4.6 | 1.2 - 4.6 | 0 - 1.2 | 1.60 |
| G-14 | 4/27/87 | 1 | 4.7 | -- | 1.7 - 4.7 | 1.2 - 4.7 | 0 - 1.2 | 1.50 |
| G-15 | 4/27/87 | 1 | 4.0 | -- | 1.6 - 4.0 | 1.0 - 4.0 | 0 - 1.0 | 1.85 |
| G-16 * | 4/27/87 | 1 | 4.0 | -- | 1.8 - 4.0 | 1.2 - 4.0 | 0 - 1.2 | 1.85 |
| G-17 | 4/27/87 | 1 | 4.0 | 3 | 1.8 - 4.0 | 1.2 - 4.0 | 0 - 1.2 | 1.50 |
| G-18 | 4/29/87 | 1 | 4.1 | 3 | 1.8 - 4.1 | 1.2 - 4.1 | 0 - 1.2 | 1.85 |
| G-19 * | 4/29/87 | 1 | 4.2 | 2.5 | 1.9 - 4.2 | 1.2 - 4.2 | 0 - 1.2 | 1.20 |

* Gas well destroyed by vandalism.

-- Landfill material not encountered.

Table 8. Water-Level Elevation Data (November 18, 1988) for Nassau County Observation Wells Screened in the Shallow Zone of the Magothy Aquifer in the Vicinity of the Syosset Landfill, Syosset, New York.

| Nassau County Well Number | NYSDEC Well Number | Measuring-Point (MP) | | Water-Level Elevation (ft above mean sea level) | Elevation of Screened Zone (ft above mean sea level) |
|------------------------------|-----------------------|---|---------------------------------|--|---|
| | | Elevation (ft above mean sea level) | Depth to Water (ft below mp) | | |
| O-6A | N9353 | 140.42 | 66.55 | 73.87 | 51.77 - 41.77 |
| O-7A | N9059 | 228.24 | 150.64 | 77.60 | 58.64 - 53.64 |
| O-8 | N1194 | 167.98 | 90.56 | 77.42 | 68.88 - 63.88 |
| O-9 | N1195 | 148.30 | 74.30 | 74.00 | 36.95 - 31.95 |
| OP-1 | N9926 | 168.18 | 89.81 | 78.37 | 46.28 - 41.28 |
| OP-2 | N9928 | 145.21 | 69.74 | 75.47 | 67.71 - 62.71 |
| OP-3 | N9927 | 161.68 | 88.10 | 73.58 | 75.48 - 70.48 |
| P-7 | N1212 | 227.66 | 149.74 | 77.92 | 47.89 - 42.89 |
| P-8A | N8888 | 174.49 | 97.58 | 76.91 | 68.29 - 63.29 |
| P-9B | N9920 | 145.95 | 74.10 | 71.85 | 64.75 - 59.75 |
| PT-1A | N10604 | 190.18 | 110.35 | 79.83 | ? |
| PT-2 | N9933 | 178.97 | 101.25 | 77.72 | 73.08 - 68.08 |
| PT-3 | N9981 | 165.66 | 90.98 | 74.68 | 65.26 - 60.26 |
| PT-4 | N9932 | 145.54 | 74.94 | 70.60 | 48.74 - 43.74 |
| T-5 | N1228 | 227.12 | 167.24 | 59.88 | 55.22 - 51.22 |
| T-6A | N10609 | 238.68 | 168.20 | 70.48 | ? |
| T-8 | N1231 | 138.95 | 66.83 | 72.12 | 62.55 - 57.55 |
| TU-1 | N9934 | 173.93 | 99.08 | 74.85 | 54.73 - 49.73 |

Wells measured with a steel tape.

Table 9. Concentrations of Volatile Organic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, May and June 1988, Syosset Landfill, Syosset, New York.

| Well: | SY-1 | SY-1 | SY-1D | SY-1D | SY-2R | SY-2R |
|---------------------------|--------|--------|--------|--------|--------|--------|
| Date Sampled: | 5/3/88 | 6/6/88 | 5/3/88 | 6/6/88 | 5/4/88 | 6/7/88 |
| Parameter | | | | | | |
| Acetone | 7 J | NA | <10 | NA | <10 | NA |
| Carbon disulfide | <5 | NA | <5 | NA | <5 | NA |
| Chloromethane | <10 | <1 | <10 | <1 | <10 | <1 |
| Bromomethane | <10 | <1 | <10 | <1 | <10 | <1 |
| Dichlorodifluomethane | NA | <1 | NA | <1 | NA | <1 |
| Vinyl chloride | <10 | <1 | <10 | <1 | <10 | <1 |
| Chloroethane | <10 | <1 | <10 | <1 | <10 | <1 |
| Methylene chloride | <5 | <2 | <5 | <2 | <5 | <2 |
| Trichlorofluomethane | NA | <2 | NA | <2 | NA | <2 |
| 1,1-Dichloroethene | <5 | <2 | <5 | <2 | <5 | <2 |
| 1,1-Dichloroethane | <5 | <2 | <5 | <2 | <5 | <2 |
| 1,2-Dichloroethene | <5 | <2 | <5 | <2 | <5 | <2 |
| Chloroform | <5 | <1 | 18 J | 15 | <5 | <1 |
| 1,2-Dichloroethane | <5 | <2 | <5 | <2 | <5 | <2 |
| 1,1,1-Trichloroethane | <5 | <1 | <5 | <1 | <5 | <1 |
| Carbon tetrachloride | <5 | <1 | <5 | <1 | <5 | <1 |
| Bromodichloromethane | <5 | <1 | <5 | <1 | <5 | <1 |
| 1,2-Dichloropropane | <5 | <2 | <5 | <2 | <5 | <2 |
| trans-1,3-Dichloropropene | <5 | <2 | <5 | <2 | <5 | <2 |
| Trichloroethylene | <5 | <1 | <5 | <1 | <5 | <1 |
| Chlorodibromomethane | NA | <1 | NA | <1 | NA | <1 |
| 1,1,2-Trichloroethane | <5 | <2 | <5 | <2 | <5 | <2 |
| cis-1,3-Dichloropropene | <5 | <2 | <5 | <2 | <5 | <2 |
| 2-Chloroethyl vinyl ether | NA | <2 | NA | <2 | NA | <2 |
| Bromoform | <5 | <2 | <5 | <2 | <5 | <2 |
| 1,1,2,2-Tetrachloroethane | <5 | <2 | <5 | <2 | <5 | <2 |
| Tetrachloroethene | <5 | <1 | <5 | <1 | <5 | <1 |
| Chlorobenzene | <5 | <1 | 4 J | 3 | <5 | <1 |
| 1,3-Dichlorobenzene | NA | <2 | NA | <2 | NA | <2 |
| 1,2-Dichlorobenzene | NA | <2 | NA | <2 | NA | <2 |
| 1,4-Dichlorobenzene | NA | <2 | NA | <2 | NA | <2 |
| Benzene | <5 | <1 | <5 | <1 | <5 | <1 |
| Toluene | 2 J | <2 | <5 | <2 | <5 | <2 |
| 2-Butanone | R | NA | R | NA | R | NA |
| Vinyl acetate | <10 | NA | <10 | NA | <10 | NA |
| Dibromochloromethane | <5 | NA | <5 | NA | <5 | NA |
| 4-Methyl-2-pentanone | <10 | NA | <10 | NA | <10 | NA |
| 2-Hexanone | <10 | NA | <10 | NA | <10 | NA |
| Styrene | <5 | NA | <5 | NA | <5 | NA |
| Ethyl benzene | <5 | <1 | <5 | <1 | <5 | <1 |
| m Xylene | NA | <2 | NA | <2 | NA | <2 |
| o + p Xylene | NA | <4 | NA | <4 | NA | <4 |
| Total xylenes | <5 | NA | <5 | NA | <5 | NA |
| Total VOCs | 9 | 0 | 22 | 18 | 0 | 0 |

All results reported in micrograms per liter (ug/L).

Samples collected in May 1988 were analyzed using CLP Method for Volatile Organic Compounds by York Laboratories, Inc., Monroe, Connecticut. Samples collected in June 1988 were analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

J Estimated value.

R Data unuseable; response factor too low during initial calibration.

UJ Estimated detection limit.

Table 9. Concentrations of Volatile Organic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, May and June 1988, Syosset Landfill, Syosset, New York.

| Parameter | Well: | SY-2D | SY-2D | SY-3 | SY-3 | --- Replicates --- | |
|---------------------------|---------------|--------|--------|--------|--------|--------------------|----------------|
| | Date Sampled: | 5/4/88 | 6/7/88 | 5/4/88 | 6/7/88 | SY-3D 5/4/88 | SY-A 5/4/88 |
| Acetone | | <10 | NA | <10 | NA | <10 | <10 |
| Carbon disulfide | | <5 | NA | <5 | NA | <5 | <5 |
| Chloromethane | | <10 | <1 | <10 | <1 | <10 | <10 |
| Bromomethane | | <10 | <1 | <10 | <1 | <10 | <10 |
| Dichlorodifluomethane | | NA | <1 | NA | <1 | NA | NA |
| Vinyl chloride | | <10 | <1 | <10 | <1 | <10 | <10 |
| Chloroethane | | <10 | <1 | <10 | <1 | <10 | <10 |
| Methylene chloride | | <5 | <2 | <5 | <2 | <5 | <5 |
| Trichlorofluomethane | | NA | <2 | NA | <2 | NA | NA |
| 1,1-Dichloroethene | | <5 | <2 | <5 | <2 | <5 | <5 |
| 1,1-Dichloroethane | | <5 | 2 | 2 J | 2 | <5 | <5 |
| 1,2-Dichloroethene | | <5 | <2 | <5 | <2 | <5 | <5 |
| Chloroform | | <5 | <1 | <5 | <1 | <5 | <5 |
| 1,2-Dichloroethane | | <5 | <2 | <5 | <2 | <5 | <5 |
| 1,1,1-Trichloroethane | | <5 | <1 | <5 | <1 | <5 | <5 |
| Carbon tetrachloride | | <5 | <1 | <5 | <1 | <5 | <5 |
| Bromodichloromethane | | <5 | <1 | <5 | <1 | <5 | <5 |
| 1,2-Dichloropropane | | <5 | <2 | <5 | <2 | <5 | <5 |
| trans-1,3-Dichloropropene | | <5 | <2 | <5 | <2 | <5 | <5 |
| Trichloroethylene | | <5 | <1 | 4 J | 2 | <5 | <5 |
| Chlorodibromomethane | | NA | <1 | NA | <1 | NA | NA |
| 1,1,2-Trichloroethane | | <5 | <2 | <5 | <2 | <5 | <5 |
| cis-1,3-Dichloropropene | | <5 | <2 | <5 | <2 | <5 | <5 |
| 2-Chloroethyl vinyl ether | | NA | <2 | NA | <2 | NA | NA |
| Bromoform | | <5 | <2 | <5 | <2 | <5 | <5 |
| 1,1,2,2-Tetrachloroethane | | <5 | <2 | <5 | <2 | <5 | <5 |
| Tetrachloroethene | | <5 | 7 | <5 | <1 | <5 | <5 |
| Chlorobenzene | | 4 J | 3 | 2 J | <1 | 8 | 7 |
| 1,3-Dichlorobenzene | | NA | <2 | NA | <2 | NA | NA |
| 1,2-Dichlorobenzene | | NA | <2 | NA | <2 | NA | NA |
| 1,4-Dichlorobenzene | | NA | <2 | NA | <2 | NA | NA |
| Benzene | | <5 | <1 | <5 | <1 | 2 J | 2 J |
| Toluene | | <5 | <2 | <5 | <2 | <5 | <5 |
| 2-Butanone | | R | NA | R | NA | R | R |
| Vinyl acetate | | <10 | NA | <10 | NA | <10 | <10 |
| Dibromochloromethane | | <5 | NA | <5 | NA | <5 | <5 |
| 4-Methyl-2-pentanone | | <10 | NA | <10 | NA | <10 | <10 |
| 2-Hexanone | | <10 | NA | <10 | NA | <10 | <10 |
| Styrene | | <5 | NA | <5 | NA | <5 | <5 |
| Ethyl benzene | | <5 | <1 | <5 | <1 | <5 | <5 |
| m Xylene | | NA | <2 | NA | <2 | NA | NA |
| o + p Xylene | | NA | <4 | NA | <4 | NA | NA |
| Total xylene | | <5 | NA | <5 | NA | <5 | <5 |
| Total VOCs | | 4 | 12 | 8 | 4 | 10 | 9 |

All results reported in micrograms per liter (ug/L).

Samples collected in May 1988 were analyzed using CLP Method for Volatile Organic Compounds by York Laboratories, Inc., Monroe, Connecticut. Samples collected in June 1988 were analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

J Estimated value.

R Data unuseable; response factor too low during initial calibration.

UJ Estimated detection limit.

Table 9. Concentrations of Volatile Organic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, May and June 1988, Syosset Landfill, Syosset, New York.

| Parameter | --- Replicates --- | | | | | |
|---------------------------|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| | Well: SY-3D Date Sampled: 6/8/88 | SY-A 6/8/88 | SY-4 5/5/88 | SY-4 6/8/88 | SY-5 5/3/88 | SY-5 6/7/88 |
| Acetone | NA | NA | <10 | NA | <10 | NA |
| Carbon disulfide | NA | NA | <5 | NA | <5 | NA |
| Chloromethane | <1 | <1 | <10 | <1 | <10 | <1 |
| Bromomethane | <1 | <1 | <10 | <1 | <10 | <1 |
| Dichlorodifluoromethane | <1 | <1 | NA | <1 | NA | <1 |
| Vinyl chloride | <1 | <1 | <10 | <1 | <10 | <1 |
| Chloroethane | <1 | <1 | <10 | <1 | <10 | <1 |
| Methylene chloride | <2 | <2 | <5 | <2 | <5 | <2 |
| Trichlorofluoromethane | <2 | <2 | NA | <2 | NA | <2 |
| 1,1-Dichloroethene | <2 | <2 | <5 | <2 | <5 | <2 |
| 1,1-Dichloroethane | <2 | <2 | <5 | <2 | <5 | <2 |
| 1,2-Dichloroethene | <2 | <2 | <5 | <2 | <5 | <2 |
| Chloroform | <1 | <1 | 10 | 8 | <5 | <1 |
| 1,2-Dichloroethane | <2 | <2 | <5 | <2 | <5 | <2 |
| 1,1,1-Trichloroethane | <1 | <1 | <5 | <1 | <5 | <1 |
| Carbon tetrachloride | <1 | <1 | <5 | <1 | <5 | <1 |
| Bromodichloromethane | <1 | <1 | <5 | <1 | <5 | <1 |
| 1,2-Dichloropropane | <2 | <2 | <5 | <2 | <5 | <2 |
| trans-1,3-Dichloropropene | <2 | <2 | <5 | <2 | <5 | <2 |
| Trichloroethylene | <1 | <1 | <5 | <1 | <5 | <1 |
| Chlorodibromomethane | <1 | <1 | NA | <1 | NA | <1 |
| 1,1,2-Trichloroethane | <2 | <2 | <5 | <2 | <5 | <2 |
| cis-1,3-Dichloropropene | <2 | <2 | <5 | <2 | <5 | <2 |
| 2-Chloroethyl vinyl ether | <2 | <2 | NA | <2 | NA | <2 |
| Bromoform | <2 | <2 | <5 | <2 | <5 | <2 |
| 1,1,2,2-Tetrachloroethane | <2 | <2 | <5 | <2 | <5 | <2 |
| Tetrachloroethene | <1 | <1 | <5 | <1 | <5 | <1 |
| Chlorobenzene | 2 | 2 | <5 | <1 | <5 | <1 |
| 1,3-Dichlorobenzene | <2 | <2 | NA | <2 | NA | <2 |
| 1,2-Dichlorobenzene | <2 | <2 | NA | <2 | NA | <2 |
| 1,4-Dichlorobenzene | <2 | <2 | NA | <2 | NA | <2 |
| Benzene | 3 | 3 | <5 | <1 | <5 | <1 |
| Toluene | <2 | <2 | <5 | <2 | <5 | <2 |
| 2-Butanone | NA | NA | R | NA | 1 J | NA |
| Vinyl acetate | NA | NA | <10 | NA | <10 | NA |
| Dibromochloromethane | NA | NA | <5 | NA | <5 | NA |
| 4-Methyl-2-pentanone | NA | NA | <10 | NA | <10 | NA |
| 2-Hexanone | NA | NA | <10 | NA | <10 | NA |
| Styrene | NA | NA | <5 | NA | <5 | NA |
| Ethyl benzene | <1 | <1 | <5 | <1 | <5 | <1 |
| m Xylene | <2 | <2 | NA | <2 | NA | <2 |
| o + p Xylene | <4 | <4 | NA | <4 | NA | <4 |
| Total xylenes | NA | NA | <5 | NA | <5 | NA |
| Total VOCs | 5 | 5 | 10 | 8 | 1 | 0 |

All results reported in micrograms per liter (ug/L).

Samples collected in May 1988 were analyzed using CLP Method for Volatile Organic Compounds by York Laboratories, Inc., Monroe, Connecticut. Samples collected in June 1988 were analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

J Estimated value.

R Data unuseable; response factor too low during initial calibration.

UJ Estimated detection limit.

Table 9. Concentrations of Volatile Organic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, May and June 1988, Syosset Landfill, Syosset, New York.

| Well: | SY-6 | SY-6 | SY-6D | SY-6D | SY-7 | SY-7 |
|---------------------------|--------|--------|--------|--------|--------|--------|
| Date Sampled: | 5/2/88 | 6/6/88 | 5/2/88 | 6/6/88 | 5/2/88 | 6/6/88 |
| Parameter | | | | | | |
| Acetone | <10 | NA | <10 | NA | <10 | NA |
| Carbon disulfide | <5 | NA | <5 | NA | <5 | NA |
| Chloromethane | <10 | <1 | <10 | <1 | <10 | <1 |
| Bromomethane | <10 | <1 | <10 | <1 | <10 | <1 |
| Dichlorodifluomethane | NA | <1 | NA | <1 | NA | <1 |
| Vinyl chloride | <10 | <1 | <10 | <1 | <10 | 1 |
| Chloroethane | <10 | <1 | <10 | <1 | <10 | <1 |
| Methylene chloride | <5 | <2 | <5 | <2 | <5 | <2 |
| Trichlorofluomethane | NA | <2 | NA | <2 | NA | <2 |
| 1,1-Dichloroethene | <5 | <2 | <5 | <2 | <5 | <2 |
| 1,1-Dichloroethane | <5 | <2 | <5 | <2 | <5 | 2 |
| 1,2-Dichloroethene | <5 | <2 | <5 | <2 | 7 | 9 |
| Chloroform | <5 | <1 | 6 | 7 | <5 | 2 |
| 1,2-Dichloroethane | <5 | <2 | <5 | <2 | <5 | <2 |
| 1,1,1-Trichloroethane | 2 J | 1 | <5 | <1 | <5 | <1 |
| Carbon tetrachloride | <5 | <1 | <5 | <1 | <5 | <1 |
| Bromodichloromethane | <5 | <1 | <5 | <1 | <5 | <1 |
| 1,2-Dichloropropane | <5 | <2 | <5 | <2 | <5 | <2 |
| trans-1,3-Dichloropropene | <5 | <2 | <5 | <2 | <5 | <2 |
| Trichloroethylene | <5 | <1 | <5 | <1 | 2 J | <1 |
| Chlorodibromomethane | NA | <1 | NA | <1 | NA | <1 |
| 1,1,2-Trichloroethane | <5 | <2 | <5 | <2 | <5 | <2 |
| cis-1,3-Dichloropropene | <5 | <2 | <5 | <2 | <5 | <2 |
| 2-Chloroethyl vinyl ether | NA | <2 | NA | <2 | NA | <2 |
| Bromoform | <5 | <2 | <5 | <2 | <5 | <2 |
| 1,1,2,2-Tetrachloroethane | <5 | <2 | <5 | <2 | <5 | <2 |
| Tetrachloroethene | <5 | <1 | <5 | <1 | 3 J | 3 |
| Chlorobenzene | <5 | <1 | <5 | <1 | <5 | <1 |
| 1,3-Dichlorobenzene | NA | <2 | NA | <2 | NA | <2 |
| 1,2-Dichlorobenzene | NA | <2 | NA | <2 | NA | <2 |
| 1,4-Dichlorobenzene | NA | <2 | NA | <2 | NA | <2 |
| Benzene | <5 | <1 | <5 | <1 | 1 J | <1 |
| Toluene | <5 | <2 | 2 J | <2 | <5 | <2 |
| 2-Butanone | R | NA | R | NA | R | NA |
| Vinyl acetate | <10 | NA | <10 | NA | <10 | NA |
| Dibromochloromethane | <5 | NA | <5 | NA | <5 | NA |
| 4-Methyl-2-pentanone | <10 | NA | <10 | NA | <10 | NA |
| 2-Hexanone | <10 | NA | <10 | NA | <10 | NA |
| Styrene | <5 | NA | <5 | NA | <5 | NA |
| Ethyl benzene | <5 | <1 | <5 | <1 | <5 | <1 |
| m Xylene | NA | <2 | NA | <2 | NA | <2 |
| o + p Xylene | NA | <4 | NA | <4 | NA | <4 |
| Total xylenes | <5 | NA | <5 | NA | <5 | NA |
| Total VOCs | 2 | 1 | 8 | 7 | 13 | 17 |

All results reported in micrograms per liter (ug/L).

Samples collected in May 1988 were analyzed using CLP Method for Volatile Organic Compounds by York Laboratories, Inc., Monroe, Connecticut. Samples collected in June 1988 were analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

J Estimated value.

R Data unuseable; response factor too low during initial calibration.

UJ Estimated detection limit.

Table 9. Concentrations of Volatile Organic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, May and June 1988, Syosset Landfill, Syosset, New York.

| Well: | SY-8 | SY-8 | SY-9 | SY-9 | W-3 | W-3 |
|---------------------------|--------|--------|--------|--------|--------|--------|
| Date Sampled: | 5/3/88 | 6/8/88 | 5/2/88 | 6/8/88 | 5/5/88 | 6/7/88 |
| Parameter | | | | | | |
| Acetone | <10 | NA | <10 | NA | <10 | NA |
| Carbon disulfide | <5 | NA | <5 | NA | <5 | NA |
| Chloromethane | <10 | <1 | <10 | <1 | <10 | <1 |
| Bromomethane | <10 | <1 | <10 | <1 | <10 | <1 |
| Dichlorodifluomethane | NA | <1 | NA | <1 | NA | <1 |
| Vinyl chloride | <10 | <1 | <10 | <1 | <10 | <1 |
| Chloroethane | <10 | <1 | <10 | <1 | <10 | <1 |
| Methylene chloride | <5 | <2 | <5 | <2 | <5 | <2 |
| Trichlorofluomethane | NA | <2 | NA | <2 | NA | <2 |
| 1,1-Dichloroethene | <5 | <2 | <5 | <2 | <5 | <2 |
| 1,1-Dichloroethane | 4 J | 2 | <5 | <2 | <5 | <2 |
| 1,2-Dichloroethene | <5 | <2 | <5 | <2 | <5 | <2 |
| Chloroform | <5 | <1 | <5 | <1 | <5 | <1 |
| 1,2-Dichloroethane | <5 | <2 | <5 | <2 | <5 | <2 |
| 1,1,1-Trichloroethane | <5 | <1 | <5 | <1 | <5 | <1 |
| Carbon tetrachloride | <5 | <1 | <5 | <1 | <5 | <1 |
| Bromodichloromethane | <5 | <1 | <5 | <1 | <5 | <1 |
| 1,2-Dichloropropane | <5 | <2 | <5 | <2 | <5 | <2 |
| trans-1,3-Dichloropropene | <5 | <2 | <5 | <2 | <5 | <2 |
| Trichloroethylene | 7 J | 4 | <5 | <1 | <5 | <1 |
| Chlorodibromomethane | NA | <1 | NA | <1 | NA | <1 |
| 1,1,2-Trichloroethane | <5 | <2 | <5 | <2 | <5 | <2 |
| cis-1,3-Dichloropropene | <5 | <2 | <5 | <2 | <5 | <2 |
| 2-Chloroethyl vinyl ether | NA | <2 | NA | <2 | NA | <2 |
| Bromoform | <5 | <2 | <5 | <2 | <5 | <2 |
| 1,1,1,2-Tetrachloroethane | <5 | <2 | <5 | <2 | <5 | <2 |
| Tetrachloroethene | 19 J | 15 | <5 | <1 | <5 | <1 |
| Chlorobenzene | <5 | <1 | <5 | <1 | <5 | <1 |
| 1,3-Dichlorobenzene | NA | <2 | NA | <2 | NA | <2 |
| 1,2-Dichlorobenzene | NA | <2 | NA | <2 | NA | <2 |
| 1,4-Dichlorobenzene | NA | <2 | NA | <2 | NA | <2 |
| Benzene | <5 | <1 | <5 | <1 | <5 | <1 |
| Toluene | <5 | <2 | <5 | <2 | <5 | <2 |
| 2-Butanone | R | NA | R | NA | R | NA |
| Vinyl acetate | <10 | NA | <10 | NA | <10 | NA |
| Dibromochloromethane | <5 | NA | <5 | NA | <5 | NA |
| 4-Methyl-2-pentanone | <10 | NA | <10 | NA | <10 | NA |
| 2-Hexanone | <10 | NA | <10 | NA | <10 | NA |
| Styrene | <5 | NA | <5 | NA | <5 | NA |
| Ethyl benzene | <5 | <1 | <5 | <1 | <5 | <1 |
| m Xylene | NA | <2 | NA | <2 | NA | <2 |
| o + p Xylene | NA | <4 | NA | <4 | NA | <4 |
| Total xylenes | <5 | NA | <5 | NA | <5 | NA |
| Total VOCs | 30 | 21 | 0 | 0 | 0 | 0 |

All results reported in micrograms per liter (ug/L).

Samples collected in May 1988 were analyzed using CLP Method for Volatile Organic Compounds by York Laboratories, Inc., Monroe, Connecticut. Samples collected in June 1988 were analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

J Estimated value.

R Data unuseable; response factor too low during initial calibration.

UJ Estimated detection limit.

Table 9. Concentrations of Volatile Organic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, May and June 1988, Syosset Landfill, Syosset, New York.

| | Well: Date Sampled: | W-4 5/3/88 | W-4 6/7/88 | Field Blank 1 5/2/88 | Field Blank 2 5/3/88 | Field Blank 3 5/4/88 | Field Blank 4 5/5/88 |
|---------------------------|------------------------|---------------|---------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Parameter | | | | | | | |
| Acetone | | <10 | NA | <10 | <10 | <10 | <10 |
| Carbon disulfide | | <5 | NA | <5 | <5 | <5 | <5 |
| Chloromethane | | <10 | <1 UJ | <10 | <10 | <10 | <10 |
| Bromomethane | | <10 | <1 UJ | <10 | <10 | <10 | <10 |
| Dichlorodifluoromethane | | NA | <1 UJ | NA | NA | NA | NA |
| Vinyl chloride | | <10 | <1 UJ | <10 | <10 | <10 | <10 |
| Chloroethane | | <10 | <1 UJ | <10 | <10 | <10 | <10 |
| Methylene chloride | | <5 | <2 UJ | <5 | <5 | <5 | <5 |
| Trichlorofluoromethane | | NA | <2 UJ | NA | NA | NA | NA |
| 1,1-Dichloroethene | | <5 | <2 UJ | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | | <5 | <2 UJ | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethene | | <5 | <2 UJ | <5 | <5 | <5 | <5 |
| Chloroform | | <5 | <1 UJ | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | | <5 | <2 UJ | <5 | <5 | <5 | NA |
| 1,1,1-Trichloroethane | | <5 | <1 UJ | <5 | <5 | <5 | <5 |
| Carbon tetrachloride | | <5 | <1 UJ | <5 | <5 | <5 | <5 |
| Bromodichloromethane | | <5 | <1 UJ | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | | <5 | <2 UJ | <5 | <5 | <5 | <5 |
| trans-1,3-Dichloropropene | | <5 | <2 UJ | <5 | <5 | <5 | <5 |
| Trichloroethylene | | <5 | <1 UJ | <5 | <5 | <5 | <5 |
| Chlorodibromomethane | | NA | <1 UJ | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | | <5 | <2 UJ | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | | <5 | <2 UJ | <5 | <5 | <5 | <5 |
| 2-Chloroethyl vinyl ether | | NA | <2 UJ | NA | NA | NA | NA |
| Bromoform | | <5 | <2 UJ | <5 | <5 | <5 | <5 |
| 1,1,2,2-Tetrachloroethane | | <5 | <2 UJ | <5 | <5 | <5 | <5 |
| Tetrachloroethene | | <5 | <1 UJ | <5 | <5 | <5 | <5 |
| Chlorobenzene | | <5 | 37 | <5 | <5 | <5 | <5 |
| 1,3-Dichlorobenzene | | NA | <2 UJ | NA | NA | NA | NA |
| 1,2-Dichlorobenzene | | NA | <2 UJ | NA | NA | NA | NA |
| 1,4-Dichlorobenzene | | NA | 3 | NA | NA | NA | NA |
| Benzene | | <5 | <1 UJ | <5 | <5 | <5 | <5 |
| Toluene | | 2 J | <2 UJ | <5 | <5 | <5 | <5 |
| 2-Butanone | | R | NA | R | R | R | R |
| Vinyl acetate | | <10 | NA | <10 | <10 | <10 | <10 |
| Dibromochloromethane | | <5 | NA | <5 | <5 | <5 | <5 |
| 4-Methyl-2-pentanone | | <10 | NA | <10 | <10 | <10 | <10 |
| 2-Hexanone | | <10 | NA | <10 | <10 | <10 | <10 |
| Styrene | | <5 | NA | <5 | <5 | <5 | <5 |
| Ethyl benzene | | <5 | <1 UJ | <5 | <5 | <5 | <5 |
| m Xylene | | NA | <2 UJ | NA | NA | NA | NA |
| o + p Xylene | | NA | <4 UJ | NA | NA | NA | NA |
| Total xylenes | | <5 | NA | <5 | <5 | <5 | <5 |
| Total VOCs | | 2 | 40 | 0 | 0 | 0 | 0 |

All results reported in micrograms per liter (ug/L).

Samples collected in May 1988 were analyzed using CLP Method for Volatile Organic Compounds by York Laboratories, Inc., Monroe, Connecticut. Samples collected in June 1988 were analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

J Estimated value.

R Data unuseable; response factor too low during initial calibration.

UJ Estimated detection limit.

Table 9. Concentrations of Volatile Organic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, May and June 1988, Syosset Landfill, Syosset, New York.

| | Field | Field | Field | Trip | Trip | Trip |
|---------------------------|---------|---------|---------|---------|---------|---------|
| Well: | Blank 1 | Blank 2 | Blank 3 | Blank 1 | Blank 2 | Blank 3 |
| Date Sampled: | 6/6/88 | 6/7/88 | 6/8/88 | 5/2/88 | 5/3/88 | 5/4/88 |
| Parameter | | | | | | |
| Acetone | NA | NA | NA | <10 | <10 | <10 |
| Carbon disulfide | NA | NA | NA | <5 | <5 | <5 |
| Chloromethane | <1 | <1 UJ | <1 | <10 | <10 | <10 |
| Bromomethane | <1 | <1 UJ | <1 | <10 | <10 | <10 |
| Dichlorodifluomethane | <1 | <1 UJ | <1 | NA | NA | NA |
| Vinyl chloride | <1 | <1 UJ | <1 | <10 | <10 | <10 |
| Chloroethane | <1 | <1 UJ | <1 | <10 | <10 | <10 |
| Methylene chloride | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| Trichlorofluomethane | <2 | <2 UJ | <2 | NA | NA | NA |
| 1,1-Dichloroethene | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| 1,2-Dichloroethene | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| Chloroform | <1 | <1 UJ | <1 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| 1,1,1-Trichloroethane | <1 | <1 UJ | <1 | <5 | <5 | <5 |
| Carbon tetrachloride | <1 | <1 UJ | <1 | <5 | <5 | <5 |
| Bromodichloromethane | <1 | <1 UJ | <1 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| trans-1,3-Dichloropropene | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| Trichloroethylene | <1 | <1 UJ | <1 | <5 | <5 | <5 |
| Chlorodibromomethane | <1 | <1 UJ | <1 | NA | NA | NA |
| 1,1,2-Trichloroethane | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| 2-Chloroethyl vinyl ether | <2 | <2 UJ | <2 | NA | NA | NA |
| Bromoform | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| 1,1,2,2-Tetrachloroethane | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| Tetrachloroethene | <1 | <1 UJ | <1 | <5 | <5 | <5 |
| Chlorobenzene | <1 | <1 UJ | <1 | <5 | <5 | <5 |
| 1,3-Dichlorobenzene | <2 | <2 UJ | <2 | NA | NA | NA |
| 1,2-Dichlorobenzene | <2 | <2 UJ | <2 | NA | NA | NA |
| 1,4-Dichlorobenzene | <2 | <2 UJ | <2 | NA | NA | NA |
| Benzene | <1 | <1 UJ | <1 | <5 | <5 | <5 |
| Toluene | <2 | <2 UJ | <2 | <5 | <5 | <5 |
| 2-Butanone | NA | NA | NA | R | R | R |
| Vinyl acetate | NA | NA | NA | <10 | <10 | <10 |
| Dibromochloromethane | NA | NA | NA | <5 | <5 | <5 |
| 4-Methyl-2-pentanone | NA | NA | NA | <10 | <10 | <10 |
| 2-Hexanone | NA | NA | NA | <10 | <10 | <10 |
| Styrene | NA | NA | NA | <5 | <5 | <5 |
| Ethyl benzene | <1 | <1 UJ | <1 | <5 | <5 | <5 |
| m Xylene | <2 | <2 UJ | <2 | NA | NA | NA |
| o + p Xylene | <4 | <4 UJ | <4 | NA | NA | NA |
| Total xylenes | NA | NA | NA | <5 | <5 | <5 |
| Total VOCs | 0 | 0 | 0 | 0 | 0 | 0 |

All results reported in micrograms per liter (ug/L).

Samples collected in May 1988 were analyzed using CLP Method for Volatile Organic Compounds by York Laboratories, Inc., Monroe, Connecticut. Samples collected in June 1988 were analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

J Estimated value.

R Data unuseable; response factor too low during initial calibration.

UJ Estimated detection limit.

Table 9. Concentrations of Volatile Organic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, May and June 1988, Syosset Landfill, Syosset, New York.

| Parameter | Well: | | Trip | | Trip | | Trip | |
|---------------------------|---------------|---------|---------|---------|---------|---------|---------|---------|
| | Date Sampled: | Blank 4 | Blank 1 | Blank 2 | Blank 3 | Blank 3 | Blank 3 | Blank 3 |
| | | 5/5/88 | 6/6/88 | 6/7/88 | 6/8/88 | 6/8/88 | 6/8/88 | 6/8/88 |
| Acetone | | <10 | NA | NA | NA | NA | NA | NA |
| Carbon disulfide | | <5 | NA | NA | NA | NA | NA | NA |
| Chloromethane | | <10 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| Bromomethane | | <10 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| Dichlorodifluoromethane | | NA | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| Vinyl chloride | | <10 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| Chloroethane | | <10 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| Methylene chloride | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| Trichlorofluoromethane | | NA | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| 1,1-Dichloroethene | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| 1,1-Dichloroethane | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| 1,2-Dichloroethene | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| Chloroform | | <5 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| 1,2-Dichloroethane | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| 1,1,1-Trichloroethane | | <5 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| Carbon tetrachloride | | <5 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| Bromodichloromethane | | <5 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| 1,2-Dichloropropane | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| trans-1,3-Dichloropropene | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| Trichloroethylene | | <5 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| Chlorodibromomethane | | NA | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| 1,1,2-Trichloroethane | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| cis-1,3-Dichloropropene | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| 2-Chloroethyl vinyl ether | | NA | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| Bromoform | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| 1,1,2,2-Tetrachloroethane | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| Tetrachloroethene | | <5 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| Chlorobenzene | | <5 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| 1,3-Dichlorobenzene | | NA | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| 1,2-Dichlorobenzene | | NA | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| 1,4-Dichlorobenzene | | NA | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| Benzene | | <5 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| Toluene | | <5 | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| 2-Butanone | | R | NA | NA | NA | NA | NA | NA |
| Vinyl acetate | | <10 | NA | NA | NA | NA | NA | NA |
| Dibromochloromethane | | <5 | NA | NA | NA | NA | NA | NA |
| 4-Methyl-2-pentanone | | <10 | NA | NA | NA | NA | NA | NA |
| 2-Hexanone | | <10 | NA | NA | NA | NA | NA | NA |
| Styrene | | <5 | NA | NA | NA | NA | NA | NA |
| Ethyl benzene | | <5 | <1 | <1 UJ | <1 | <1 | <1 | <1 |
| m Xylene | | NA | <2 | <2 UJ | <2 | <2 | <2 | <2 |
| o + p Xylene | | NA | <4 | <4 UJ | <4 | <4 | <4 | <4 |
| Total xylenes | | <5 | NA | NA | NA | NA | NA | NA |
| Total VOCs | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

All results reported in micrograms per liter (ug/L).

Samples collected in May 1988 were analyzed using CLP Method for Volatile Organic Compounds by York Laboratories, Inc., Monroe, Connecticut. Samples collected in June 1988 were analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

J Estimated value.

R Data unuseable; response factor too low during initial calibration.

UJ Estimated detection limit.

Table 10. Concentrations of PCBs in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-1 | SY-1 | SY-1D | SY-1D | SY-2R | SY-2R |
|---------------|--------|--------|--------|--------|--------|--------|
| Date Sampled: | 5/3/88 | 6/6/88 | 5/3/88 | 6/6/88 | 5/4/88 | 6/7/88 |
| Parameter | | | | | | |
| Aroclor 1016 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1221 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1232 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1242 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1248 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1254 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1260 | <1 | <1 | <1 | <1 | <1 | <1 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using USEPA Method 608 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

Table 10. Concentrations of PCBs in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Parameter | Well: | SY-2D | SY-2D | SY-3 | SY-3 | --- Replicates --- | |
|--------------|---------------|--------|--------|--------|--------|--------------------|----------------|
| | Date Sampled: | 5/4/88 | 6/7/88 | 5/4/88 | 6/7/88 | SY-3D 5/4/88 | SY-A 5/4/88 |
| Aroclor 1016 | | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1221 | | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1232 | | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1242 | | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1248 | | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1254 | | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1260 | | <1 | <1 | <1 | <1 | <1 | <1 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using USEPA Method 608 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

Table 10. Concentrations of PCBs in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | --- Replicates --- | | | | | |
|---------------|--------------------|--------|--------|--------|--------|--------|
| | SY-3D | SY-A | SY-4 | SY-4 | SY-5 | SY-5 |
| Date Sampled: | 6/8/88 | 6/8/88 | 5/5/88 | 6/8/88 | 5/3/88 | 6/7/88 |
| Parameter | | | | | | |
| Aroclor 1016 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1221 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1232 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1242 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1248 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1254 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1260 | <1 | <1 | <1 | <1 | <1 | <1 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using USEPA Method 608 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

Table 10. Concentrations of PCBs in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-6 | SY-6 | SY-6D | SY-6D | SY-7 | SY-7 |
|---------------|--------|--------|--------|--------|--------|--------|
| Date Sampled: | 5/2/88 | 6/6/88 | 5/2/88 | 6/6/88 | 5/2/88 | 6/6/88 |
| Parameter | | | | | | |
| Aroclor 1016 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1221 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1232 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1242 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1248 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1254 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1260 | <1 | <1 | <1 | <1 | <1 | <1 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using USEPA Method 608 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

Table 10. Concentrations of PCBs in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-8 | SY-8 | SY-9 | SY-9 | W-3 | W-3 |
|---------------|--------|--------|--------|---------|--------|--------|
| Date Sampled: | 5/3/88 | 6/8/88 | 5/3/88 | 6/10/88 | 5/5/88 | 6/7/88 |
| Parameter | | | | | | |
| Aroclor 1016 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1221 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1232 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1242 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1248 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1254 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor 1260 | <1 | <1 | <1 | <1 | <1 | <1 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using USEPA Method 608 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

Table 10. Concentrations of PCBs in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Parameter | Well: | W-4 | W-4 |
|--------------|---------------|--------|--------|
| | Date Sampled: | 5/3/88 | 6/7/88 |
| Aroclor 1016 | | <1 | <1 |
| Aroclor 1221 | | <1 | <1 |
| Aroclor 1232 | | <1 | <1 |
| Aroclor 1242 | | <1 | <1 |
| Aroclor 1248 | | <1 | <1 |
| Aroclor 1254 | | <1 | <1 |
| Aroclor 1260 | | <1 | <1 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using USEPA Method 608 by EcoTest Laboratories, Inc., North Babylon, New York.

NA Not analyzed.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-1 | SY-1 | SY-1D | SY-1D | SY-2R |
|-----------------------------|--------|--------|--------|--------|--------|
| Date Sampled: | 5/3/88 | 6/6/88 | 5/3/88 | 6/6/88 | 5/4/88 |
| Parameter | | | | | |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | 1 J | <10 | <10 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | 0.5 J | <10 | <10 |
| bis(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <10 |
| n-Nitroso-di-n-propylamine | <10 | <10 | <10 | <10 | <10 |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 |
| Isophorone | <10 | <10 | <10 | <10 | <10 |
| Benzoic acid | <50 | <50 | <50 | <50 | <50 |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Naphthalene | <10 | <10 | <10 | <10 | <10 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 |
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| Diethylphthalate | 0.3 J | <10 | <10 | <10 | <10 |
| 4-Chlorophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-1 | SY-1 | SY-1D | SY-1D | SY-2R |
|----------------------------|--------|--------|--------|--------|--------|
| Date Sampled: | 5/3/88 | 6/6/88 | 5/3/88 | 6/6/88 | 5/4/88 |
| Parameter | | | | | |
| Fluorene | <10 | <10 | <10 | <10 | <10 |
| 4-Nitroaniline | <50 | <50 | <50 | <50 | R |
| n-Nitrosodiphenylamine | <10 | <10 | <10 | <10 | <10 |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 |
| Anthracene | <10 | <10 | <10 | <10 | <10 |
| di-n-Butylphthalate | <10 | <10 | <10 | <10 | <10 |
| Fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Pyrene | <10 | <10 | <10 | <10 | <10 |
| Butylbenzylphthalate | <10 | <10 | <10 | <10 | <10 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <10 | <20 | <20 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | <10 | 7 JB | <10 | 18 B | <10 |
| Chrysene | <10 | <10 | <10 | <10 | <10 |
| di-n-Octyl phthalate | <10 | <10 | <10 | <10 | <10 |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <10 |
| Dibenzo(a,h)anthracene | <10 | <10 | <10 | <10 | <10 |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-2R | SY-2D | SY-2D | SY-3 | SY-3 |
|-----------------------------|--------|--------|--------|--------|--------|
| Date Sampled: | 6/7/88 | 5/4/88 | 6/7/88 | 5/4/88 | 6/7/88 |
| Parameter | | | | | |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | 1 J | <10 | <10 | <10 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| bis(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <10 |
| n-Nitroso-di-n-propylamine | <10 | <10 | <10 | <10 | <10 |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 |
| Isophorone | <10 | <10 | <10 | <10 | <10 |
| Benzoic acid | <50 | <50 | <50 | <50 | <50 |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Naphthalene | <10 | <10 | <10 | <10 | <10 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 |
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| Diethylphthalate | <10 | 0.4 J | <10 | <10 | <10 |
| 4-Chlorophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-2R | SY-2D | SY-2D | SY-3 | SY-3 |
|----------------------------|--------|--------|--------|--------|--------|
| Date Sampled: | 6/7/88 | 5/4/88 | 6/7/88 | 5/4/88 | 6/7/88 |
| Parameter | | | | | |
| Fluorene | <10 | <10 | <10 | 0.4 J | <10 |
| 4-Nitroaniline | <50 | R | <50 | R | <50 |
| n-Nitrosodiphenylamine | <10 | 2 J | 2 J | <10 | <10 |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 |
| Anthracene | <10 | <10 | <10 | <10 | <10 |
| di-n-Butylphthalate | <10 | <10 | <10 | <10 | <10 |
| Fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Pyrene | <10 | <10 | <10 | <10 | <10 |
| Butylbenzylphthalate | <10 | 0.3 J | <10 | 0.2 J | <10 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <20 | <20 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | 5 JB | <10 | 13 B | <10 | 6 B |
| Chrysene | <10 | <10 | <10 | <10 | <10 |
| di-n-Octyl phthalate | <10 | <10 | <10 | 24 B | 4 J |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <10 |
| Dibenzo(a,h)anthracene | <10 | <10 | <10 | <10 | <10 |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | --- Replicates --- | | --- Replicates --- | | SY-4 |
|-----------------------------|--------------------|--------|--------------------|--------|--------|
| | SY-3D | SY-A | SY-3D | SY-A | |
| Date Sampled: | 5/4/88 | 5/4/88 | 6/8/88 | 6/8/88 | 5/5/88 |
| Parameter | | | | | |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 |
| 1,3-Dichlorobenzene | 0.5 J | 0.4 J | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | 3 J | 3 J | 3 J | 3 J | <10 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | 1 J | 1 J | <10 | <10 | <10 |
| bis(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <10 |
| n-Nitroso-di-n-propylamine | <10 | <10 | <10 | <10 | <10 |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 |
| Isophorone | <10 | <10 | <10 | <10 | <10 |
| Benzoic acid | 5 J | <50 | 5 J | 8 J | <50 |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Naphthalene | <10 | <10 | <10 | <10 | <10 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 |
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| Diethylphthalate | <10 | <10 | <10 | <10 | <10 |
| 4-Chlorophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Parameter | --- Replicates --- | | --- Replicates --- | | SY-4 |
|----------------------------|--------------------|--------|--------------------|--------|--------|
| | Well: SY-3D | SY-A | SY-3D | SY-A | |
| Date Sampled: | 5/4/88 | 5/4/88 | 6/8/88 | 6/8/88 | 5/5/88 |
| Fluorene | <10 | <10 | <10 | <10 | <10 |
| 4-Nitroaniline | R | R | <50 | <50 | R |
| n-Nitrosodiphenylamine | 0.7 J | 0.6 J | <10 | <10 | <10 |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 |
| Anthracene | <10 | <10 | <10 | <10 | <10 |
| di-n-Butylphthalate | <10 | <10 | <10 | <10 | <10 |
| Fluoranthene | 0.2 J | <10 | <10 | <10 | <10 |
| Pyrene | 0.3 J | <10 | <10 | <10 | <10 |
| Butylbenzylphthalate | 1 J | 0.3 J | 3 J | 1 J | <10 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <20 | <20 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | <10 | <10 | 9 JB | 12 B | <10 |
| Chrysene | <10 | <10 | <10 | <10 | <10 |
| di-n-Octyl phthalate | 39 B | 22 B | 2 J | 0.7 J | <10 |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <10 |
| Dibenzo(a,h)anthracene | <10 | <10 | <10 | <10 | <10 |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-4 | SY-5 | SY-5 | SY-6 | SY-6 |
|-----------------------------|--------|--------|--------|--------|--------|
| Date Sampled: | 6/8/88 | 5/3/88 | 6/7/88 | 5/2/88 | 6/6/88 |
| Parameter | | | | | |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| bis(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <10 |
| n-Nitroso-di-n-propylamine | <10 | <10 | <10 | <10 | <10 |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 |
| Isophorone | <10 | <10 | <10 | <10 | <10 |
| Benzoic acid | <50 | 6 J | <50 | <50 | <50 |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Naphthalene | <10 | <10 | <10 | <10 | <10 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 |
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| Diethylphthalate | <10 | <10 | <10 | <10 | <10 |
| 4-Chlorophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-4 | SY-5 | SY-5 | SY-6 | SY-6 |
|----------------------------|--------|--------|--------|--------|--------|
| Date Sampled: | 6/8/88 | 5/3/88 | 6/7/88 | 5/2/88 | 6/6/88 |
| Parameter | | | | | |
| Fluorene | <10 | <10 | <10 | <10 | <10 |
| 4-Nitroaniline | <50 | R | <50 | <50 | <50 |
| n-Nitrosodiphenylamine | <10 | <10 | <10 | <10 | <10 |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 |
| Anthracene | <10 | <10 | <10 | <10 | <10 |
| di-n-Butylphthalate | <10 | <10 | <10 | <10 | <10 |
| Fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Pyrene | <10 | <10 | <10 | <10 | <10 |
| Butylbenzylphthalate | <10 | 0.3 J | <10 | <10 | <10 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <20 | <20 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | 34 B | <10 | 5 JB | <10 | 4 JB |
| Chrysene | <10 | <10 | <10 | <10 | <10 |
| di-n-Octyl phthalate | <10 | <10 | <10 | <10 | <10 |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <10 |
| Dibenzo(a,h)anthracene | <10 | <10 | <10 | <10 | <10 |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-6D | SY-6D | SY-7 | SY-7 | SY-8 |
|-----------------------------|--------|--------|--------|--------|--------|
| Date Sampled: | 5/2/88 | 6/6/88 | 5/2/88 | 6/6/88 | 5/3/88 |
| Parameter | | | | | |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | 2 J | <10 | <10 |
| bis(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <10 |
| n-Nitroso-di-n-propylamine | <10 | <10 | <10 | <10 | <10 |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 |
| Isophorone | <10 | <10 | <10 | <10 | <10 |
| Benzoic acid | <50 | <50 | <50 | <50 | <50 |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Naphthalene | <10 | <10 | 0.8 J | <10 | <10 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Methylnaphthalene | <10 | <10 | 0.4 J | <10 | <10 |
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| Diethylphthalate | <10 | <10 | <10 | <10 | <10 |
| 4-Chlorophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-6D | SY-6D | SY-7 | SY-7 | SY-8 |
|----------------------------|--------|--------|--------|--------|--------|
| Date Sampled: | 5/2/88 | 6/6/88 | 5/2/88 | 6/6/88 | 5/3/88 |
| Parameter | | | | | |
| Fluorene | <10 | <10 | <10 | <10 | <10 |
| 4-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| n-Nitrosodiphenylamine | <10 | <10 | <10 | <10 | <10 |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 |
| Anthracene | <10 | <10 | <10 | <10 | <10 |
| di-n-Butylphthalate | <10 | <10 | <10 | <10 | <10 |
| Fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Pyrene | <10 | <10 | <10 | <10 | <10 |
| Butylbenzylphthalate | <10 | <10 | <10 | <10 | <10 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <20 | <20 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | <10 | 2 JB | <10 | 2 JB | <10 |
| Chrysene | <10 | <10 | <10 | <10 | <10 |
| di-n-Octyl phthalate | <10 | <10 | <10 | <10 | <10 |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <10 |
| Dibenzo(a,h)anthracene | <10 | <10 | <10 | <10 | <10 |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-8 | SY-9 | SY-9 | W-3 | W-3 |
|-----------------------------|--------|--------|---------|--------|--------|
| Date Sampled: | 6/8/88 | 5/4/88 | 6/10/88 | 5/5/88 | 6/7/88 |
| Parameter | | | | | |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | 0.5 J | <10 | <10 | <10 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| bis(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <10 |
| n-Nitroso-di-n-propylamine | <10 | <10 | <10 | <10 | <10 |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 |
| Isophorone | <10 | <10 | <10 | <10 | <10 |
| Benzoic acid | <50 | <50 | <50 | <50 | <50 |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Naphthalene | <10 | <10 | <10 | <10 | <10 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 |
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| Diethylphthalate | <10 | <10 | <10 | <10 | <10 |
| 4-Chlorophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-8 | SY-9 | SY-9 | W-3 | W-3 |
|----------------------------|--------|--------|---------|--------|--------|
| Date Sampled: | 6/8/88 | 5/4/88 | 6/10/88 | 5/5/88 | 6/7/88 |
| Parameter | | | | | |
| Fluorene | <10 | <10 | <10 | 0.4 J | <10 |
| 4-Nitroaniline | <50 | R | <50 | R | <50 |
| n-Nitrosodiphenylamine | <10 | <10 | <10 | 0.5 J | <10 |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 |
| Anthracene | <10 | <10 | <10 | <10 | <10 |
| di-n-Butylphthalate | <10 | <10 | <10 | <10 | <10 |
| Fluoranthene | <10 | 0.2 J | <10 | <10 | <10 |
| Pyrene | <10 | <10 | <10 | <10 | <10 |
| Butylbenzylphthalate | <10 | <10 | <10 | <10 | <10 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <10 | <20 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | 4 JB | <10 | 32 B | <10 | 6 JB |
| Chrysene | <10 | <10 | <10 | <10 | <10 |
| di-n-Octyl phthalate | <10 | <10 | 32 | <10 | <10 |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <10 |
| Dibenzo(a,h)anthracene | <10 | <10 | <10 | <10 | <10 |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Parameter | Well: W-4 | |
|-----------------------------|----------------------|--------|
| | Date Sampled: 5/3/88 | 6/7/88 |
| bis(2-Chloroethyl)ether | <10 | <10 |
| 1,3-Dichlorobenzene | 0.6 J | <10 |
| 1,4-Dichlorobenzene | 3 J | <10 |
| Benzyl alcohol | <10 | <10 |
| 1,2-Dichlorobenzene | 1 J | <10 |
| bis(2-Chloroisopropyl)ether | <10 | <10 |
| n-Nitroso-di-n-propylamine | <10 | <10 |
| Hexachloroethane | <10 | <10 |
| Nitrobenzene | <10 | <10 |
| Isophorone | <10 | <10 |
| Benzoic acid | <50 | <50 |
| bis(2-Chloroethoxy)methane | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 |
| Naphthalene | 2 J | <10 |
| 4-Chloroaniline | <10 | <10 |
| Hexachlorobutadiene | <10 | <10 |
| 2-Methylnaphthalene | <10 | <10 |
| Hexachlorocyclopentadiene | <10 | <10 |
| 2-Chloronaphthalene | <10 | <10 |
| 2-Nitroaniline | <50 | <50 |
| Dimethyl phthalate | <10 | <10 |
| Acenaphthylene | <10 | <10 |
| 3-Nitroaniline | <50 | <50 |
| Acenaphthene | <10 | <10 |
| Dibenzofuran | <10 | <10 |
| 2,4-Dinitrotoluene | <10 | <10 |
| 2,6-Dinitrotoluene | <10 | <10 |
| Diethylphthalate | <10 | <10 |
| 4-Chlorophenyl-phenylether | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 11. Concentrations of Base/Neutral Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Parameter | Well: | W-4 | W-4 |
|----------------------------|---------------|--------|--------|
| | Date Sampled: | 5/3/88 | 6/7/88 |
| Fluorene | | <10 | <10 |
| 4-Nitroaniline | | <50 | <50 |
| n-Nitrosodiphenylamine | | <10 | <10 |
| 4-Bromophenyl-phenylether | | <10 | <10 |
| Hexachlorobenzene | | <10 | <10 |
| Phenanthrene | | <10 | <10 |
| Anthracene | | <10 | <10 |
| di-n-Butylphthalate | | <10 | <10 |
| Fluoranthene | | <10 | <10 |
| Pyrene | | <10 | <10 |
| Butylbenzylphthalate | | <10 | <10 |
| 3,3'-Dichlorobenzidine | | <10 | <20 |
| Benzo(a)anthracene | | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | | <10 | 13 B |
| Chrysene | | <10 | <10 |
| di-n-Octyl phthalate | | <10 | <10 |
| Benzo(b)fluoranthene | | <10 | <10 |
| Benzo(k)fluoranthene | | <10 | <10 |
| Benzo(a)pyrene | | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | | <10 | <10 |
| Dibenzo(a,h)anthracene | | <10 | <10 |
| Benzo(g,h,i)perylene | | <10 | <10 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

R Data unuseable; response factor too low during initial calibration.

Table 12. Concentrations of Acid Extractable Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| | Well: SY-1 | SY-1 | SY-1D | SY-1D | SY-2R |
|----------------------------|------------|--------|--------|--------|--------|
| Date Sampled: | 5/3/88 | 6/6/88 | 5/3/88 | 6/6/88 | 5/4/88 |
| Parameter | | | | | |
| Phenol | <10 | <10 | <10 | <10 | <10 |
| 2-Chlorophenol | <10 | <10 | <10 | <10 | <10 |
| 2-Methylphenol | <10 | <10 | <10 | <10 | <10 |
| 4-Methylphenol | <10 | <10 | <10 | <10 | <10 |
| 2-Nitrophenol | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dimethylphenol | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dichlorophenol | <10 | <10 | <10 | <10 | <10 |
| 4-Chloro-3-methylphenol | <10 | <10 | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | <10 | <10 | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | <50 | <50 | <50 | <50 | <50 |
| 2,4-Dinitrophenol | <50 | <50 | <50 | <50 | <50 |
| 4-Nitrophenol | <50 | <50 | <50 | <50 | <50 |
| 4,6-Dinitro-2-methylphenol | <50 | <50 | <50 | <50 | <50 |
| Pentachlorophenol | <50 | <50 | <50 | <50 | <50 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

Table 12. Concentrations of Acid Extractable Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| | Well: | SY-2R | SY-2D | SY-2D | SY-3 | SY-3 |
|----------------------------|---------------|--------|--------|--------|--------|--------|
| | Date Sampled: | 6/7/88 | 5/4/88 | 6/7/88 | 5/4/88 | 6/7/88 |
| Parameter | | | | | | |
| Phenol | | <10 | <10 | <10 | <10 | <10 |
| 2-Chlorophenol | | <10 | <10 | <10 | <10 | <10 |
| 2-Methylphenol | | <10 | <10 | <10 | <10 | <10 |
| 4-Methylphenol | | <10 | <10 | <10 | <10 | <10 |
| 2-Nitrophenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dimethylphenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dichlorophenol | | <10 | <10 | <10 | <10 | <10 |
| 4-Chloro-3-methylphenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | | <50 | <50 | <50 | <50 | <50 |
| 2,4-Dinitrophenol | | <50 | <50 | <50 | <50 | <50 |
| 4-Nitrophenol | | <50 | <50 | <50 | <50 | <50 |
| 4,6-Dinitro-2-methylphenol | | <50 | <50 | <50 | <50 | <50 |
| Pentachlorophenol | | <50 | <50 | <50 | <50 | <50 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

Table 12. Concentrations of Acid Extractable Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Parameter | --- Replicates --- | | --- Replicates --- | | SY-4 |
|----------------------------|--------------------|--------|--------------------|--------|--------|
| | Well: | SY-3D | SY-A | SY-3D | |
| | Date Sampled: | 5/4/88 | 5/4/88 | 6/8/88 | 6/8/88 |
| Phenol | | <10 | <10 | <10 | <10 |
| 2-Chlorophenol | | <10 | <10 | <10 | <10 |
| 2-Methylphenol | | <10 | <10 | <10 | <10 |
| 4-Methylphenol | | <10 | <10 | <10 | <10 |
| 2-Nitrophenol | | <10 | <10 | <10 | <10 |
| 2,4-Dimethylphenol | | <10 | <10 | <10 | <10 |
| 2,4-Dichlorophenol | | <10 | <10 | <10 | <10 |
| 4-Chloro-3-methylphenol | | <10 | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | | <10 | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | | <50 | <50 | <50 | <50 |
| 2,4-Dinitrophenol | | <50 | <50 | <50 | <50 |
| 4-Nitrophenol | | <50 | <50 | <50 | <50 |
| 4,6-Dinitro-2-methylphenol | | <50 | <50 | <50 | <50 |
| Pentachlorophenol | | <50 | <50 | <50 | <50 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

Table 12. Concentrations of Acid Extractable Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| | Well: | SY-4 | SY-5 | SY-5 | SY-6 | SY-6 |
|----------------------------|---------------|--------|--------|--------|--------|--------|
| | Date Sampled: | 6/8/88 | 5/3/88 | 6/7/88 | 5/2/88 | 6/6/88 |
| Parameter | | | | | | |
| Phenol | | <10 | <10 | <10 | <10 | <10 |
| 2-Chlorophenol | | <10 | <10 | <10 | <10 | <10 |
| 2-Methylphenol | | <10 | <10 | <10 | <10 | <10 |
| 4-Methylphenol | | <10 | 2 J | <10 | <10 | <10 |
| 2-Nitrophenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dimethylphenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dichlorophenol | | <10 | <10 | <10 | <10 | <10 |
| 4-Chloro-3-methylphenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | | <50 | <50 | <50 | <50 | <50 |
| 2,4-Dinitrophenol | | <50 | <50 | <50 | <50 | <50 |
| 4-Nitrophenol | | <50 | <50 | <50 | <50 | <50 |
| 4,6-Dinitro-2-methylphenol | | <50 | <50 | <50 | <50 | <50 |
| Pentachlorophenol | | <50 | <50 | <50 | <50 | <50 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

Table 12. Concentrations of Acid Extractable Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| | Well: | SY-6D | SY-6D | SY-7 | SY-7 | SY-8 |
|----------------------------|---------------|--------|--------|--------|--------|--------|
| | Date Sampled: | 5/2/88 | 6/6/88 | 5/2/88 | 6/6/88 | 5/3/88 |
| Parameter | | | | | | |
| Phenol | | <10 | <10 | <10 | <10 | <10 |
| 2-Chlorophenol | | <10 | <10 | <10 | <10 | <10 |
| 2-Methylphenol | | <10 | <10 | <10 | <10 | <10 |
| 4-Methylphenol | | <10 | <10 | 1 J | <10 | <10 |
| 2-Nitrophenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dimethylphenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dichlorophenol | | <10 | <10 | <10 | <10 | <10 |
| 4-Chloro-3-methylphenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | | <10 | <10 | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | | <50 | <50 | <50 | <50 | <50 |
| 2,4-Dinitrophenol | | <50 | <50 | <50 | <50 | <50 |
| 4-Nitrophenol | | <50 | <50 | <50 | <50 | <50 |
| 4,6-Dinitro-2-methylphenol | | <50 | <50 | <50 | <50 | <50 |
| Pentachlorophenol | | <50 | <50 | <50 | <50 | <50 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

Table 12. Concentrations of Acid Extractable Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-8 | SY-9 | SY-9 | W-3 | W-3 |
|----------------------------|--------|--------|---------|--------|--------|
| Date Sampled: | 6/8/88 | 5/4/88 | 6/10/88 | 5/5/88 | 6/7/88 |
| Parameter | | | | | |
| Phenol | <10 | <10 | <10 | <10 | <10 |
| 2-Chlorophenol | <10 | <10 | <10 | <10 | <10 |
| 2-Methylphenol | <10 | <10 | <10 | <10 | <10 |
| 4-Methylphenol | <10 | <10 | <10 | <10 | <10 |
| 2-Nitrophenol | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dimethylphenol | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dichlorophenol | <10 | <10 | <10 | <10 | <10 |
| 4-Chloro-3-methylphenol | <10 | <10 | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | <10 | <10 | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | <50 | <50 | <50 | <50 | <50 |
| 2,4-Dinitrophenol | <50 | <50 | <50 | <50 | <50 |
| 4-Nitrophenol | <50 | <50 | <50 | <50 | <50 |
| 4,6-Dinitro-2-methylphenol | <50 | <50 | <50 | <50 | <50 |
| Pentachlorophenol | <50 | <50 | <50 | <50 | <50 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

Table 12. Concentrations of Acid Extractable Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Parameter | Well: W-4 | W-4 |
|----------------------------|----------------------|--------|
| | Date Sampled: 5/3/88 | 6/7/88 |
| Phenol | <10 | <10 |
| 2-Chlorophenol | <10 | <10 |
| 2-Methylphenol | <10 | <10 |
| 4-Methylphenol | <10 | <10 |
| 2-Nitrophenol | <10 | <10 |
| 2,4-Dimethylphenol | <10 | <10 |
| 2,4-Dichlorophenol | <10 | <10 |
| 4-Chloro-3-methylphenol | <10 | <10 |
| 2,4,6-Trichlorophenol | <10 | <10 |
| 2,4,5-Trichlorophenol | <50 | <50 |
| 2,4-Dinitrophenol | <50 | <50 |
| 4-Nitrophenol | <50 | <50 |
| 4,6-Dinitro-2-methylphenol | <50 | <50 |
| Pentachlorophenol | <50 | <50 |

All results reported in micrograms per liter (ug/L).

Samples analyzed using CLP Method for Base Neutrals and Acid Extractables by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value.

B Analyte detected in the blank as well as in the sample.

Table 13. Concentrations of Metals (Filtered and Unfiltered) in Water Samples
Collected from Monitoring Wells during the On-Site Ground-Water Study,
Syosset Landfill, Syosset, New York.

| Well: | SY-1 * | SY-1 | SY-1 | SY-1D * | SY-1D | SY-1D |
|-----------------|---------|-----------|-----------|-----------|-----------|-----------|
| Date Sampled: | 5/3/88 | 5/3/88 | 6/6/88 | 5/3/88 | 5/3/88 | 6/6/88 |
| Parameter | | | | | | |
| Antimony as Sb | <0.005 | 0.005 J | <0.005 | 0.010 J | 0.006 J | 0.015 |
| Arsenic as As | 0.17 J | 0.060 J | 0.040 J | <0.002 | <0.002 | <0.002 UJ |
| Beryllium as Be | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cadmium as Cd | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chromium as Cr | 0.010 J | <0.005 UJ | <0.005 UJ | <0.005 UJ | <0.005 UJ | <0.005 UJ |
| Copper as Cu | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Lead as Pb | <0.005 | <0.005 | <0.005 | 0.005 J | <0.005 | <0.005 |
| Mercury as Hg | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Nickel as Ni | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Selenium as Se | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Silver as Ag | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Thallium as Tl | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.027 J |
| Zinc as Zn | 0.04 | 0.03 | <0.02 | 0.03 | 0.02 | <0.02 |
| Sodium as Na | 32 J | 35 J | 39 J | 270 J | 350 J | 300 J |
| Potassium as K | 8.9 J | 8.8 J | 10 | 22 J | 23 J | 25 |
| Barium as Ba | 0.05 | 0.17 | 0.17 J | <0.05 | 0.07 | 0.09 J |
| Iron as Fe | 88 J | 28 J | 28 J | 0.06 J | <0.05 UJ | <0.05 |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

* Unfiltered sample.

J Estimated value.

UJ Estimated detection limit.

Table 13. Concentrations of Metals (Filtered and Unfiltered) in Water Samples
Collected from Monitoring Wells during the On-Site Ground-Water Study,
Syosset Landfill, Syosset, New York.

| Well: | SY-2R * | SY-2R | SY-2R | SY-2D * | SY-2D | SY-2D |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Date Sampled: | 5/4/88 | 5/4/88 | 6/7/88 | 5/4/88 | 5/4/88 | 6/7/88 |
| Parameter | | | | | | |
| Antimony as Sb | <0.005 | <0.005 | 0.010 | <0.005 | 0.006 J | 0.010 |
| Arsenic as As | <0.002 | <0.002 | <0.002 UJ | <0.002 | <0.002 | <0.002 UJ |
| Beryllium as Be | 0.003 J | 0.002 J | 0.0035 | <0.001 | <0.001 | <0.001 |
| Cadmium as Cd | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chromium as Cr | <0.005 UJ | <0.005 UJ | <0.005 UJ | <0.005 UJ | <0.005 UJ | <0.005 UJ |
| Copper as Cu | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Lead as Pb | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Mercury as Hg | <0.0002 | <0.00025 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Nickel as Ni | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Selenium as Se | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Silver as Ag | 0.002 J | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Thallium as Tl | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 J |
| Zinc as Zn | 0.09 | 0.09 | <0.02 | <0.02 | <0.02 | <0.02 |
| Sodium as Na | 44 J | 48 J | 51 J | 180 J | 190 J | 160 J |
| Potassium as K | 3.8 | 4.0 | 6.3 | 29 | 32 | 32 |
| Barium as Ba | 0.09 | 0.11 | 0.15 J | <0.05 | 0.06 | 0.08 J |
| Iron as Fe | 0.20 J | <0.05 UJ | <0.05 | 0.45 J | <0.05 UJ | 0.06 J |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

* Unfiltered sample.

J Estimated value.

UJ Estimated detection limit.

Table 13. Concentrations of Metals (Filtered and Unfiltered) in Water Samples
Collected from Monitoring Wells during the On-Site Ground-Water Study,
Syosset Landfill, Syosset, New York.

| Parameter | Replicates | | | | | | |
|-----------------|--------------|-----------|---------|-----------|-----------|-----------|-----------|
| | Well: SY-3 * | SY-3 | SY-3 | SY-3D * | SY-3D | SY-A * | SY-A |
| Date Sampled: | 5/4/88 | 5/4/88 | 6/7/88 | 5/4/88 | 5/4/88 | 5/4/88 | 5/4/88 |
| Antimony as Sb | 0.012 J | 0.009 J | <0.005 | <0.005 | <0.005 | <0.005 | 0.006 J |
| Arsenic as As | 0.18 | 0.020 | 0.012 J | 0.004 | 0.003 | 0.004 | 0.003 J |
| Beryllium as Be | 0.002 J | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cadmium as Cd | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chromium as Cr | 0.018 J | <0.005 UJ | <0.005 | <0.005 UJ | <0.005 UJ | <0.005 UJ | <0.005 |
| Copper as Cu | 0.06 | <0.02 | <0.02 | 0.12 | 0.03 | 0.09 | 0.03 |
| Lead as Pb | 0.13 J | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 UJ |
| Mercury as Hg | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 J |
| Nickel as Ni | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Selenium as Se | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Silver as Ag | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Thallium as Tl | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zinc as Zn | 0.50 | 0.15 | <0.02 | 0.08 | 0.02 | 0.08 | 0.02 |
| Sodium as Na | 83 J | 150 J | 150 J | 260 J | 270 J | 260 J | 280 J |
| Potassium as K | 89 J | 92 J | 95 | 140 J | 150 J | 140 J | 150.0 J |
| Barium as Ba | 0.19 | 3.8 | 0.29 J | 0.12 | 0.18 | 0.10 | 0.19 |
| Iron as Fe | 190 J | 0.06 J | 0.45 J | 1.1 J | 0.12 J | 1.1 J | 0.10 J |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

* Unfiltered sample.

J Estimated value.

UJ Estimated detection limit.

Table 13. Concentrations of Metals (Filtered and Unfiltered) in Water Samples
Collected from Monitoring Wells during the On-Site Ground-Water Study,
Syosset Landfill, Syosset, New York.

| Well: | --- Replicates --- | | | | |
|-----------------|--------------------|-----------|----------|-----------|-----------|
| | SY-3D | SY-A | SY-4 * | SY-4 | SY-4 |
| Date Sampled: | 6/8/88 | 6/8/88 | 5/5/88 | 5/5/88 | 6/8/88 |
| Parameter | | | | | |
| Antimony as Sb | 0.007 J | 0.010 J | 0.006 J | 0.006 J | 0.007 |
| Arsenic as As | 0.004 J | 0.003 J | 0.006 | <0.002 | <0.002 UJ |
| Beryllium as Be | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cadmium as Cd | <0.001 | <0.001 | 0.001 | <0.001 | <0.001 |
| Chromium as Cr | <0.005 UJ | <0.005 UJ | 0.017 J | <0.005 UJ | <0.005 UJ |
| Copper as Cu | 0.12 J | 0.13 J | 0.05 | <0.02 | <0.02 |
| Lead as Pb | <0.005 | <0.005 | 0.13 J | <0.002 | <0.005 |
| Mercury as Hg | <0.0002 | <0.0002 | <0.00025 | <0.00025 | <0.0002 |
| Nickel as Ni | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Selenium as Se | <0.002 | <0.002 | 0.002 J | <0.002 | <0.002 |
| Silver as Ag | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Thallium as Tl | 0.01 J | 0.009 J | <0.005 | <0.005 | 0.005 J |
| Zinc as Zn | <0.02 | <0.02 | 0.21 | <0.02 | <0.02 |
| Sodium as Na | 300 J | 280 J | 66 J | 110 J | 180 J |
| Potassium as K | 210 | 170 | 9.3 J | 9.0 J | 6.1 |
| Barium as Ba | 0.12 J | 0.16 J | <0.05 | 0.06 | 0.08 J |
| Iron as Fe | <0.05 | 0.06 J | 75 J | <0.05 UJ | <0.05 |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

* Unfiltered sample.

J Estimated value.

UJ Estimated detection limit.

Table 13. Concentrations of Metals (Filtered and Unfiltered) in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-5 * | SY-5 | SY-5 | SY-6 * | SY-6 | SY-6 |
|-----------------|-----------|-----------|-----------|---------|-----------|-----------|
| Date Sampled: | 5/3/88 | 5/3/88 | 6/7/88 | 5/2/88 | 5/2/88 | 6/6/88 |
| Parameter | | | | | | |
| Antimony as Sb | 0.008 J | 0.005 J | 0.010 | 0.009 J | 0.010 J | 0.013 |
| Arsenic as As | 0.015 | 0.002 | <0.002 UJ | 0.005 | <0.002 | <0.002 UJ |
| Beryllium as Be | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cadmium as Cd | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chromium as Cr | <0.005 UJ | <0.005 UJ | <0.005 UJ | 0.006 J | <0.005 UJ | <0.005 UJ |
| Copper as Cu | <0.02 | <0.02 | <0.02 | 0.06 | <0.02 | <0.02 |
| Lead as Pb | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Mercury as Hg | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Nickel as Ni | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Selenium as Se | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Silver as Ag | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Thallium as Tl | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zinc as Zn | 3.0 | 0.04 | <0.02 | 0.13 | <0.02 | <0.02 |
| Sodium as Na | 110 J | 120 J | 130 J | 32 J | 34 J | 28 J |
| Potassium as K | 4.0 J | 4.3 J | 10 | 2.1 J | 2.5 J | 2.3 |
| Barium as Ba | <0.05 | 0.13 | 0.12 J | 0.05 | 0.32 | <0.05 |
| Iron as Fe | 110 J | 3.1 J | 4.0 J | 13 J | <0.05 J | 0.10 J |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

* Unfiltered samples.

J Estimated value.

UJ Estimated detection limit.

Table 13. Concentrations of Metals (Filtered and Unfiltered) in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| | Well: SY-6D * | SY-6D | SY-6D | SY-7 * | SY-7 | SY-7 |
|-----------------|---------------|-----------|-----------|---------|-----------|-----------|
| Date Sampled: | 5/2/88 | 5/2/88 | 6/6/88 | 5/2/88 | 5/2/88 | 6/6/88 |
| Parameter | | | | | | |
| Antimony as Sb | 0.005 J | 0.010 J | <0.005 | <0.005 | 0.010 J | <0.005 |
| Arsenic as As | <0.002 | <0.002 | <0.002 UJ | 0.004 | 0.002 | <0.002 UJ |
| Beryllium as Be | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cadmium as Cd | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chromium as Cr | <0.005 UJ | <0.005 UJ | <0.005 UJ | 0.007 J | <0.005 UJ | <0.005 UJ |
| Copper as Cu | 0.06 | <0.02 | <0.02 | 0.03 | <0.02 | <0.02 |
| Lead as Pb | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Mercury as Hg | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Nickel as Ni | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Selenium as Se | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Silver as Ag | <0.001 | <0.001 | <0.001 | 0.002 J | <0.001 | <0.001 |
| Thallium as Tl | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.015 J |
| Zinc as Zn | 0.06 | 0.02 | <0.02 | 0.66 | 0.03 | <0.02 |
| Sodium as Na | 49 J | 50 J | 51 J | 58 J | 75 J | 74 J |
| Potassium as K | 2.0 J | 2.0 J | 2.8 | 2.2 J | 2.3 J | 3.5 |
| Barium as Ba | 0.05 | 0.06 | 0.05 J | 1.0 | 0.20 | 0.24 J |
| Iron as Fe | 0.24 J | 0.20 J | 0.20 J | 66 J | 58 J | 55 J |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

* Unfiltered samples.

J Estimated value.

UJ Estimated detection limit.

Table 13. Concentrations of Metals (Filtered and Unfiltered) in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Well: | SY-8 * | SY-8 | SY-8 | SY-9 * | SY-9 | SY-9 |
|-----------------|-----------|-----------|-----------|---------|-----------|-----------|
| Date Sampled: | 5/3/88 | 5/3/88 | 6/8/88 | 5/4/88 | 5/3/88 | 6/10/88 |
| Parameter | | | | | | |
| Antimony as Sb | 0.006 J | <0.005 | 0.012 J | 0.005 J | 0.010 J | 0.015 |
| Arsenic as As | <0.002 | <0.002 | <0.002 UJ | 0.060 | <0.002 | <0.002 UJ |
| Beryllium as Be | <0.001 | <0.001 | <0.001 | 0.001 J | <0.001 | <0.001 |
| Cadmium as Cd | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.0025 |
| Chromium as Cr | <0.005 UJ | <0.005 UJ | <0.005 UJ | 0.012 J | <0.005 UJ | <0.005 UJ |
| Copper as Cu | <0.02 | <0.02 | <0.02 | 0.31 | 0.02 | 0.04 J |
| Lead as Pb | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Mercury as Hg | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Nickel as Ni | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Selenium as Se | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Silver as Ag | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Thallium as Tl | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zinc as Zn | 5.2 | 3.2 | 4.0 | 0.60 | 0.19 | 0.15 |
| Sodium as Na | 56 J | 58 J | 56 J | 26 J | 35 J | 28 J |
| Potassium as K | 8.1 J | 8.8 J | 11 | 3.5 J | 3.1 J | 4.0 |
| Barium as Ba | 0.05 | 0.07 | 0.10 J | 0.10 | 0.22 | 0.14 J |
| Iron as Fe | 0.12 J | 0.08 J | 0.18 J | 27 J | <0.05 UJ | 0.18 J |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

* Unfiltered samples.

J Estimated value.

UJ Estimated detection limit.

Table 13. Concentrations of Metals (Filtered and Unfiltered) in Water Samples
Collected from Monitoring Wells during the On-Site Ground-Water Study,
Syosset Landfill, Syosset, New York.

| Well: | W-3 * | W-3 | W-3 | W-4 * | W-4 | W-4 |
|-----------------|----------|-----------|-----------|---------|-----------|-----------|
| Date Sampled: | 5/5/88 | 5/5/88 | 6/7/88 | 5/3/88 | 5/3/88 | 6/7/88 |
| Parameter | | | | | | |
| Antimony as Sb | 0.016 J | 0.010 J | 0.010 | 0.018 J | <0.005 | 0.009 |
| Arsenic as As | 0.15 | 0.030 | 0.024 J | 0.080 | <0.002 | <0.002 UJ |
| Beryllium as Be | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cadmium as Cd | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chromium as Cr | 0.038 J | <0.005 UJ | <0.005 UJ | 0.012 J | <0.005 UJ | <0.005 UJ |
| Copper as Cu | 0.31 | <0.02 | <0.02 | 0.040 | 0.02 | <0.02 |
| Lead as Pb | 0.074 J | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Mercury as Hg | <0.00025 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Nickel as Ni | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Selenium as Se | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Silver as Ag | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Thallium as Tl | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.010 |
| Zinc as Zn | 0.26 | 0.05 | <0.02 | 0.14 | 0.03 | <0.02 |
| Sodium as Na | 120 J | 160 J | 200 J | 530 J | 770 J | 600 J |
| Potassium as K | 80 J | 67 J | 150 | 23 J | 33 J | 35 |
| Barium as Ba | 0.66 | 0.70 | 0.92 J | 0.08 | 0.20 | 0.13 J |
| Iron as Fe | 63 J | 0.60 J | 0.68 J | 26 J | <0.05 UJ | 0.40 J |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

* Unfiltered samples.

J Estimated value.

UJ Estimated detection limit.

Table 14. Concentrations of Selected Inorganic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study and the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| | Well: SY-1 | SY-1 | SY-1D | SY-1D | SY-2R | SY-2R |
|-----------------------------------|------------|----------|--------|----------|--------|----------|
| Date Sampled: | 5/3/88 | 6/6/88 | 5/3/88 | 6/6/88 | 5/4/88 | 6/7/88 |
| Parameter | | | | | | |
| Total dissolved solids | 200 | 220 | 1,200 | 1,100 | 210 | 230 |
| Specific conductance (umho/cm) | 400 | 390 | 1,880 | 1,800 | 390 | 360 |
| pH (units) | 5.8 | 6.3 | 6.1 | 6.4 | 5.6 | 5.3 |
| Chloride as Cl | 45 | 60 | 460 | 400 | 52 | 57 |
| Nitrate as N | 0.6 | <0.5 | 13.8 | 15 | 2.4 | 1.9 |
| Ammonia as N | 3.2 | 3.2 | 16.4 | 16 | <0.05 | <0.05 |
| Hardness as CaCO ₃ | 70 | 86 | 290 | 280 | 50 | 54 |
| Bicarb. Alk CaCO ₃ | 120 | 110 | 150 | 140 | 26 | 26 |
| Carbonate Alk CaCO ₃ | 0 | 0 | 0 | 0 | 0 | 0 |
| Sulfate as SO ₄ | 22 | 11 | 230 | 240 | 50 | 70 |
| Alkalinity tot CaCO ₃ | 120 | 110 | 150 | 140 | 26 | 26 |
| Phenols as Phenol | <0.001 | 0.001 | 0.001 | <0.001 | <0.001 | <0.001 |
| Cyanide as CN | <0.02 | <0.02 UJ | <0.02 | <0.02 UJ | <0.02 | <0.02 UJ |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

J Estimated value.

UJ Estimated detection limit.

Table 14. Concentrations of Selected Inorganic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study and the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Parameter | Well: | SY-2D | SY-2D | SY-3 | SY-3 | --- Replicates --- | |
|-----------------------------------|---------------|--------|----------|--------|----------|--------------------|--------|
| | Date Sampled: | 5/4/88 | 6/7/88 | 5/4/88 | 6/7/88 | SY-3D | SY-A |
| | | 5/4/88 | 5/4/88 | 5/4/88 | 5/4/88 | 5/4/88 | 5/4/88 |
| Total dissolved solids | | 670 | 630 | 820 | 830 | 1,400 | 1,300 |
| Specific conductance (umho/cm) | | 1,440 | 1,100 | 1,930 | 1,900 | 3,220 | 3,220 |
| pH (units) | | 6.2 | 6.4 | 6.8 | 6.7 | 6.8 | 6.6 |
| Chloride as Cl | | 220 | 200 | 99 | 110 | 340 | 330 |
| Nitrate as N | | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 | <0.5 |
| Ammonia as N | | 18 | 17 | 91 | 90 | 130 | 130 |
| Hardness as CaCO ₃ | | 150 | 120 | 330 | 370 | 440 | 440 |
| Bicarb. Alk CaCO ₃ | | 270 | 280 | 880 | 890 | 1,300 | 1,200 |
| Carbonate Alk CaCO ₃ | | 0 | 0 | 0 | 0 | 0 | 0 |
| Sulfate as SO ₄ | | 47 | 68 | 42 | 16 | 22 | 23 |
| Alkalinity tot CaCO ₃ | | 270 | 280 | 880 | 890 | 1,300 | 1,200 |
| Phenols as Phenol | | <0.001 | <0.001 | 0.002 | 0.006 | 0.004 | 0.006 |
| Cyanide as CN | | <0.02 | <0.02 UJ | <0.02 | <0.02 UJ | <0.02 | <0.02 |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

J Estimated value.

UJ Estimated detection limit.

Table 14. Concentrations of Selected Inorganic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study and the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Parameter | -- Replicates -- | | | | | |
|-----------------------------------|------------------|----------|----------|--------|----------|--------|
| | Well: | SY-3D | SY-A | SY-4 | SY-4 | SY-5 |
| | Date Sampled: | 6/8/88 | 6/8/88 | 5/5/88 | 6/8/88 | 5/3/88 |
| | | | | | | 6/7/88 |
| Total dissolved solids | | 1,400 | 1,400 | 490 | 680 | 540 |
| Specific conductance (umho/cm) | | 2,800 | 2,800 | 890 | 1,000 | 880 |
| pH (units) | | 6.8 | 6.9 | 7.7 | 8.0 | 6.5 |
| Chloride as Cl | | 330 | 330 | 120 | 170 | 120 |
| Nitrate as N | | <0.5 | <0.5 | 4.3 | 12.8 | 2.0 |
| Ammonia as N | | 130 | 130 | 3.2 | 4.4 | 1.8 |
| Hardness as CaCO ₃ | | 460 | 450 | 110 | 190 | 170 |
| Bicarb. Alk CaCO ₃ | | 1,200 | 1,200 | 38 | 40 | 120 |
| Carbonate Alk CaCO ₃ | | 0 | 0 | 0 | 0 | 0 |
| Sulfate as SO ₄ | | 14 | 14 | 150 | 230 | 100 |
| Alkalinity tot CaCO ₃ | | 1,200 | 1,200 | 38 | 40 | 120 |
| Phenols as Phenol | | 0.003 | 0.006 | 0.006 | <0.001 | 0.001 |
| Cyanide as CN | | <0.02 UJ | <0.02 UJ | <0.02 | <0.02 UJ | <0.02 |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

J Estimated value.

UJ Estimated detection limit.

Table 14. Concentrations of Selected Inorganic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study and the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Well: | SY-6 | SY-6 | SY-6D | SY-6D | SY-7 | SY-7 |
|-----------------------------------|--------|--------|--------|----------|--------|----------|
| Date Sampled: | 5/2/88 | 6/6/88 | 5/2/88 | 6/6/88 | 5/2/88 | 6/6/88 |
| Parameter | | | | | | |
| Total dissolved solids | 210 | 180 | 240 | 250 | 550 | 490 |
| Specific conductance (umho/cm) | 350 | 260 | 420 | 410 | 850 | 820 |
| pH (units) | 6.9 | 7.2 | 5.8 | 5.6 | 6.2 | 6.3 |
| Chloride as Cl | 30 | 20 | 68 | 71 | 170 | 190 |
| Nitrate as N | 3.7 | 2.1 | 5.0 | 5.2 | 1.6 | 1.1 |
| Ammonia as N | <0.05 | <0.05 | 0.5 | 0.52 | 0.5 | 0.5 |
| Hardness as CaCO ₃ | 100 | 80 | 78 | 86 | 220 | 180 |
| Bicarb. Alk CaCO ₃ | 72 | 66 | 8 | 10 | 180 | 190 |
| Carbonate Alk CaCO ₃ | 0 | 0 | 0 | 0 | 0 | 0 |
| Sulfate as SO ₄ | 50 | 40 | 68 | 72 | 12 | 19 |
| Alkalinity tot CaCO ₃ | 72 | 66 | 8 | 10 | 180 | 190 |
| Phenols as Phenol | <0.001 | <0.001 | <0.001 | <0.001 | 0.006 | 0.003 |
| Cyanide as CN | 0.14 | 0.07 J | <0.02 | <0.02 UJ | <0.02 | <0.02 UJ |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

J Estimated value.

UJ Estimated detection limit.

Table 14. Concentrations of Selected Inorganic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study and the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Well: | SY-8 | SY-8 | SY-9 | SY-9 | W-3 | W-3 |
|-----------------------------------|--------|----------|--------|----------|--------|----------|
| Date Sampled: | 5/3/88 | 6/8/88 | 5/3/88 | 6/10/88 | 5/5/88 | 6/7/88 |
| Parameter | | | | | | |
| Total dissolved solids | 350 | 310 | 330 | 230 | 1,200 | 1,200 |
| Specific conductance (umho/cm) | 580 | 550 | 510 | 480 | 2,780 | 2,600 |
| pH (units) | 5.6 | 5.6 | 6.1 | 6.3 | 6.6 | 6.7 |
| Chloride as Cl | 59 | 52 | 40 | 44 | 85 | 95 |
| Nitrate as N | <0.5 | <0.5 | 0.7 | 1.8 | <0.5 | <0.5 |
| Ammonia as N | 2.8 | 3.6 | 0.38 | 0.44 | 130 | 140 |
| Hardness as CaCO ₃ | 140 | 140 | 230 | 180 | 600 | 580 |
| Bicarb. Alk CaCO ₃ | 100 | 100 | 160 | 120 | 1,400 | 1,400 |
| Carbonate Alk CaCO ₃ | 0 | 0 | 0 | 0 | 0 | 0 |
| Sulfate as SO ₄ | 110 | 120 | 75 | 66 | 20 | 20 |
| Alkalinity tot CaCO ₃ | 100 | 100 | 160 | 120 | 1,400 | 1,400 |
| Phenols as Phenol | <0.001 | <0.001 | <0.001 | <0.001 | 0.006 | 0.003 |
| Cyanide as CN | <0.02 | <0.02 UJ | <0.02 | <0.02 UJ | <0.02 | <0.02 UJ |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

J Estimated value.

UJ Estimated detection limit.

Table 14. Concentrations of Selected Inorganic Compounds in Water Samples Collected from Monitoring Wells during the On-Site Ground-Water Study and the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Parameter | Well: W-4 W-4 | |
|------------------------------------|-----------------------------|----------|
| | Date Sampled: 5/3/88 6/7/88 | |
| Total dissolved solids | 2,200 | 1,900 |
| Specific conductance (umhos/cm) | 3,350 | 3,200 |
| pH (units) | 6.2 | 6.1 |
| Chloride as Cl | 990 | 900 |
| Nitrate as N | <0.5 | <0.5 |
| Ammonia as N | 16 | 15 |
| Hardness as CaCO ₃ | 420 | 380 |
| Bicarb. Alk CaCO ₃ | 320 | 330 |
| Carbonate Alk CaCO ₃ | 0 | 0 |
| Sulfate as SO ₄ | 190 | 180 |
| Alkalinity tot CaCO ₃ | 320 | 330 |
| Phenols as Phenol | 0.003 | <0.001 |
| Cyanide as CN | <0.02 | <0.02 UJ |

All results reported in milligrams per liter (mg/L).

Samples analyzed by EcoTest Laboratories, Inc., North Babylon, New York.

J Estimated value.

UJ Estimated detection limit.

Table 15. Depth of Landfill Encountered in Soil and Well Borings at the Syosset Landfill, Syosset, New York.

| Well/Boring Designation | Depth of Landfill (ft below land surface) |
|------------------------------|--|
| ERM Wells | |
| SY-1 | 8 * |
| SY-3 | 0 |
| SY-4 | 8 |
| SY-5 | 10 |
| SY-6 | 0 |
| SY-7 | 0 |
| G&M Wells/Borings | |
| SY-1D | 0 |
| SY-2D | 0 |
| SY-3D | 0 |
| SY-6D | 0 |
| SY-8 | 41 |
| SY-9 | 0 |
| B-1 | 31 |
| B-2 | 59 |
| B-3 | 84 |
| B-4 | 54 |
| LKB Borings | |
| A | 38 |
| B | 58 |
| C | 78.5 |
| D | 91 |
| E | 36 |

* Geologic log indicates 8 feet of fill material but does not specify whether fill is clean fill or landfill material. In preparing Figure 13, it was assumed that 8 feet of landfill was encountered.

Table 16. Concentrations of Volatile Organic Compounds in Soil Samples Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | B-1 | B-1 | B-1 | B-2 | B-2 |
|---------------------------|----------|----------|----------|---------|---------|
| Sample Date: | 10/29/87 | 10/30/87 | 10/30/87 | 11/3/87 | 11/4/87 |
| Sample Depth (ft): | 15 | 40 | 55 | 30 | 60 |
| Parameter | | | | | |
| Chloromethane | <11 | 10 J | <12 | <15 | <14 |
| Bromomethane | 5 J | 9 J | <12 | <15 | <14 |
| Vinyl chloride | <11 | 8 J | <12 | <15 | <14 |
| Chloroethane | <11 | 9 J | <12 | <15 | <14 |
| Methylene chloride | 6 | <6 | <6 | 21 | <7 |
| Acetone | 61 B | 33 B | 13 | 280 B | 53 B |
| Carbon disulfide | 4 J | 6 | <6 | <7 | <7 |
| 1,1-Dichloroethene | <6 | <6 | <6 | <7 | <7 |
| 1,1-Dichloroethane | <6 | 4 J | <6 | <7 | <7 |
| 1,2-Dichloroethene | <6 | <6 | <6 | <7 | <7 |
| Chloroform | 6 | 7 | 6 | 13 | <7 |
| 1,2-Dichloroethane | <6 | 6 | <6 | <7 | <7 |
| 2-Butanone | 20 | 14 | <12 | <15 | 20 |
| 1,1,1-Trichloroethane | 5 J | 6 | <6 | <7 | <7 |
| Carbon tetrachloride | 4 J | 4 J | <6 | <7 | <7 |
| Vinyl acetate | <11 | <11 | <12 | <15 | <14 |
| Bromodichloromethane | 4 J | 6 | <6 | <7 | <7 |
| 1,2-Dichloropropane | <6 | 7 | <6 | <7 | <7 |
| trans-1,3-Dichloropropene | <6 | 4 J | <6 | <7 | <7 |
| Trichloroethylene | <6 | 5 J | <6 | <7 | <7 |
| Dibromochloromethane | <6 | 6 | <6 | <7 | <7 |
| 1,1,2-Trichloroethane | <6 | 8 | <6 | <7 | <7 |
| Benzene | 6 | 8 | <6 | <7 | <7 |
| cis-1,3-Dichloropropene | <6 | 6 | <6 | <7 | <7 |
| 2-Chloroethylvinylether | <11 | <11 | <12 | <15 | <14 |
| Bromoform | 3 J | 6 | <6 | <7 | <7 |
| 4-Methyl-2-pentanone | <11 | 5 J | <12 | <15 | <14 |
| 2-Hexanone | <11 | <11 | <12 | <15 | <14 |
| Tetrachloroethene | 5 J | 5 J | <6 | <7 | <7 |
| 1,1,2,2-Tetrachloroethane | <6 | 9 | <6 | <7 | <7 |
| Toluene | 6 | 9 | <6 | <7 | <7 |
| Chlorobenzene | 10 | 10 | <6 | 11 | <7 |
| Ethylbenzene | 5 J | 16 | <6 | 8 | <7 |
| Styrene | 4 J | 6 | <6 | <7 | <7 |
| Total xylenes | 69 | 29 | <6 | 16 B | <7 |
| Dichlorodifluoromethane | -- | -- | -- | -- | -- |
| Total VOCs | 123 | 165 | 19 | 53 | 20 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 624 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

-- No detection limit given.

Table 16. Concentrations of Volatile Organic Compounds in Soil Samples Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | B-2 | B-2 | B-3 | B-3 | B-3 |
|---------------------------|---------|------------|---------|---------|---------|
| Sample Date: | 11/4/87 | 10/27/87 | 11/7/87 | 11/9/87 | 11/9/87 |
| Sample Depth (ft): | 85 | Trip Blank | 40 | 80 | 110 |
| Parameter | | | | | |
| Chloromethane | <11 | <10 | <80 | <12 | <12 |
| Bromomethane | <11 | <10 | <80 | <12 | <12 |
| Vinyl chloride | <11 | <10 | <80 | <12 | <12 |
| Chloroethane | <11 | <10 | <80 | <12 | <12 |
| Methylene chloride | <6 | <5 | <40 | <6 | <6 |
| Acetone | 16 B | 18 B | 750 B | 63 B | 54 B |
| Carbon disulfide | <6 | <5 | 22 J | <6 | 5 J |
| 1,1-Dichloroethene | <6 | <5 | <40 | <6 | <6 |
| 1,1-Dichloroethane | <6 | <5 | <40 | <6 | <6 |
| 1,2-Dichloroethene | <6 | <5 | <40 | <6 | <6 |
| Chloroform | 4 J | 5 B | <40 | <6 | <6 |
| 1,2-Dichloroethane | <6 | <5 | <40 | <6 | <6 |
| 2-Butanone | <11 | <10 | <80 | <12 | <12 |
| 1,1,1-Trichloroethane | <6 | <5 | <40 | <6 | <6 |
| Carbon tetrachloride | <6 | <5 | <40 | <6 | <6 |
| Vinyl acetate | <11 | <10 | <80 | <12 | <12 |
| Bromodichloromethane | <6 | 2 J | <40 | <6 | <6 |
| 1,2-Dichloropropane | <6 | <5 | <40 | <6 | <6 |
| trans-1,3-Dichloropropene | <6 | <5 | <40 | <6 | <6 |
| Trichloroethylene | <6 | <5 | <40 | <6 | <6 |
| Dibromochloromethane | <6 | 2 J | <40 | <6 | <6 |
| 1,1,2-Trichloroethane | <6 | <5 | <40 | <6 | <6 |
| Benzene | <6 | <5 | <40 | <6 | <6 |
| cis-1,3-Dichloropropene | <6 | <5 | <40 | <6 | <6 |
| 2-Chloroethylvinylether | <11 | <10 | <80 | <12 | <12 |
| Bromoform | <6 | <5 | <40 | <6 | <6 |
| 4-Methyl-2-pentanone | <11 | <10 | <80 | <12 | <12 |
| 2-Hexanone | <11 | <10 | <80 | <12 | <12 |
| Tetrachloroethene | <6 | <5 | <40 | <6 | <6 |
| 1,1,2,2-Tetrachloroethane | <6 | <5 | <40 | <6 | <6 |
| Toluene | <6 | <5 | <40 | <6 | <6 |
| Chlorobenzene | <6 | <5 | 180 | <6 | <6 |
| Ethylbenzene | <6 | <5 | <40 | <6 | <6 |
| Styrene | <6 | <5 | <40 | <6 | <6 |
| Total xylenes | <6 | <5 | <40 | <6 | <6 |
| Dichlorodifluoromethane | -- | -- | -- | -- | -- |
| Total VOCs | 0 | 0 | 180 | 0 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 624 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

-- No detection limit given.

Table 16. Concentrations of Volatile Organic Compounds in Soil Samples Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | B-3 (REP 1) | B-3 (REP 2) | B-4 | B-4 | B-4 |
|---------------------------|-------------|-------------|----------|----------|----------|
| Sample Date: | 11/9/87 | 11/9/87 | 11/16/87 | 11/17/87 | 11/17/87 |
| Sample Depth (ft): | 110 | 110 | 40 | 70 | 100 |
| Parameter | | | | | |
| Chloromethane | <12 | <12 | <14 | <11 | <10 |
| Bromomethane | <12 | <12 | <14 | <11 | <10 |
| Vinyl chloride | <12 | <12 | <14 | <11 | <10 |
| Chloroethane | <12 | <12 | <14 | <11 | <10 |
| Methylene chloride | <6 | <6 | 26 B | 8 B | 74 B |
| Acetone | 44 B | 45 B | 180 B | 36 B | 73 B |
| Carbon disulfide | <6 | 3 J | <7 | <5 | <5 |
| 1,1-Dichloroethene | <6 | <6 | <7 | <5 | <5 |
| 1,1-Dichloroethane | <6 | <6 | <7 | <5 | <5 |
| 1,2-Dichloroethene | <6 | <6 | <7 | <5 | <5 |
| Chloroform | <6 | <6 | 3 J | <5 | <5 |
| 1,2-Dichloroethane | <6 | <6 | <7 | <5 | <5 |
| 2-Butanone | <12 | <12 | 32 | <11 | <10 |
| 1,1,1-Trichloroethane | <6 | <6 | <7 | <5 | <5 |
| Carbon tetrachloride | <6 | <6 | <7 | <5 | <5 |
| Vinyl acetate | <12 | <12 | <14 | <11 | <10 |
| Bromodichloromethane | <6 | <6 | <7 | <5 | <5 |
| 1,2-Dichloropropane | <6 | <6 | <7 | <5 | <5 |
| trans-1,3-Dichloropropene | <6 | <6 | <7 | <5 | <10 |
| Trichloroethylene | <6 | <6 | <7 | <5 | <5 |
| Dibromochloromethane | <6 | <6 | <7 | <5 | <5 |
| 1,1,2-Trichloroethane | <6 | <6 | <7 | <5 | <5 |
| Benzene | <6 | <6 | <7 | <5 | <5 |
| cis-1,3-Dichloropropene | <6 | <6 | <7 | <5 | <5 |
| 2-Chloroethylvinylether | <12 | <12 | <14 | <11 | <10 |
| Bromoform | <6 | <6 | <7 | <5 | <5 |
| 4-Methyl-2-pentanone | <12 | <12 | <14 | <11 | <10 |
| 2-Hexanone | <12 | <12 | <14 | <11 | <10 |
| Tetrachloroethene | <6 | <6 | <7 | <5 | <5 |
| 1,1,2,2-Tetrachloroethane | <6 | <6 | <7 | <5 | <5 |
| Toluene | <6 | <6 | <7 | <5 | <5 |
| Chlorobenzene | <6 | <6 | 15 | <5 | <5 |
| Ethylbenzene | <6 | <6 | <7 | <5 | <5 |
| Styrene | <6 | <6 | <7 | <5 | <5 |
| Total xylenes | <6 | <6 | <7 | <5 | <5 |
| Dichlorodifluoromethane | -- | -- | -- | -- | -- |
| Total VOCs | 0 | 0 | 47 | 0 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 624 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

-- No detection limit given.

Table 16A. Concentrations of Volatile Organic Compounds in Soil Samples Collected from Well Borings during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | SY-1D | SY-1D | SY-1D | SY-1D | SY-1D |
|---------------------------|----------|----------|--------|--------|---------|
| Sample Date: | 12/28/87 | 12/29/87 | 1/7/88 | 1/8/88 | 1/27/88 |
| Sample Depth (ft): | 30 | 60 | 100 | 120 | 150 |
| Parameter | | | | | |
| Chloromethane | <5 | <5 | <5 | <5 | <5 |
| Bromomethane | <5 | <5 | <5 | <5 | <5 |
| Dichlorodifluoromethane | <5 | <5 | <5 | <5 | <5 |
| Vinyl chloride | <5 | <5 | <5 | <5 | <5 |
| Chloroethane | <5 | <5 | <5 | <5 | <5 |
| Methylene chloride | <10 | <10 | <10 | <10 | <10 |
| Trichlorofluoromethane | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethene | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethane | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichloroethene | <10 | <10 | <10 | <10 | <10 |
| Chloroform | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <10 | <10 | <10 | <10 | <10 |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 |
| Carbon tetrachloride | <5 | <5 | <5 | <5 | <5 |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <10 | <10 | <10 | <10 | <10 |
| trans-1,3-Dichloropropene | <10 | <10 | <10 | <10 | <10 |
| Trichloroethylene | <5 | <5 | <5 | <5 | <5 |
| Chlorodibromomethane | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <10 | <10 | <10 | <10 | <10 |
| cis-1,3-Dichloropropene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloroethyl vinyl ether | <10 | <10 | <10 | <10 | <10 |
| Bromoform | <10 | <10 | <10 | <10 | <10 |
| 1,1,2,2-Tetrachloroethane | <10 | <10 | <10 | <10 | <10 |
| Tetrachloroethene | <5 | <5 | <5 | <5 | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Benzene | <5 | <5 | <5 | <5 | <5 |
| Toluene | <10 | <10 | <10 | <10 | <10 |
| Ethyl benzene | <5 | <5 | <5 | <5 | <5 |
| m Xylene | <10 | <10 | <10 | <10 | <10 |
| o + p Xylene | <20 | <20 | <20 | <20 | <20 |
| Total VOCs | 0 | 0 | 0 | 0 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

Table 16A. Concentrations of Volatile Organic Compounds in Soil Samples Collected from Well Borings during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | SY-2D | SY-2D | SY-2D | SY-2D | SY-2D |
|---------------------------|--------|--------|--------|--------|--------|
| Sample Date: | 2/4/88 | 2/8/88 | 2/8/88 | 2/8/88 | 2/8/88 |
| Sample Depth (ft): | 33 | 63 | 93 | 123 | 153 |
| Parameter | | | | | |
| Chloromethane | <5 | <5 | <5 | <5 | <5 |
| Bromomethane | <5 | <5 | <5 | <5 | <5 |
| Dichlorodifluoromethane | <5 | <5 | <5 | <5 | <5 |
| Vinyl chloride | <5 | <5 | <5 | <5 | <5 |
| Chloroethane | <5 | <5 | <5 | <5 | <5 |
| Methylene chloride | <10 | <10 | <10 | <10 | <10 |
| Trichlorofluoromethane | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethene | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethane | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichloroethene | <10 | <10 | <10 | <10 | <10 |
| Chloroform | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <10 | <10 | <10 | <10 | <10 |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 |
| Carbon tetrachloride | <5 | <5 | <5 | <5 | <5 |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <10 | <10 | <10 | <10 | <10 |
| trans-1,3-Dichloropropene | <10 | <10 | <10 | <10 | <10 |
| Trichloroethylene | <5 | <5 | <5 | <5 | <5 |
| Chlorodibromomethane | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <10 | <10 | <10 | <10 | <10 |
| cis-1,3-Dichloropropene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloroethyl vinyl ether | <10 | <10 | <10 | <10 | <10 |
| Bromoform | <10 | <10 | <10 | <10 | <10 |
| 1,1,2,2-Tetrachloroethane | <10 | <10 | <10 | <10 | <10 |
| Tetrachloroethene | <5 | <5 | <5 | <5 | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Benzene | <5 | <5 | <5 | <5 | <5 |
| Toluene | <10 | <10 | <10 | <10 | <10 |
| Ethyl benzene | <5 | <5 | <5 | <5 | <5 |
| m Xylene | <10 | <10 | <10 | <10 | <10 |
| o + p Xylene | <20 | <20 | <20 | <20 | <20 |
| Total VOCs | 0 | 0 | 0 | 0 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

Table 16A. Concentrations of Volatile Organic Compounds in Soil Samples Collected from Well Borings during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | SY-2D | SY-3D | SY-3D | SY-3D | SY-3D |
|---------------------------|--------|---------|---------|---------|---------|
| Sample Date: | 2/8/88 | 2/17/88 | 2/17/88 | 2/17/88 | 2/18/88 |
| Sample Depth (ft): | 183 | 33 | 63 | 93 | 123 |
| Parameter | | | | | |
| Chloromethane | <5 | <5 | <5 | <5 | <5 |
| Bromomethane | <5 | <5 | <5 | <5 | <5 |
| Dichlorodifluoromethane | <5 | <5 | <5 | <5 | <5 |
| Vinyl chloride | <5 | <5 | <5 | <5 | <5 |
| Chloroethane | <5 | <5 | <5 | <5 | <5 |
| Methylene chloride | <10 | <10 | <10 | <10 | <10 |
| Trichlorofluoromethane | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethene | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethane | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichloroethene | <10 | <10 | <10 | <10 | <10 |
| Chloroform | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <10 | <10 | <10 | <10 | <10 |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 |
| Carbon tetrachloride | <5 | <5 | <5 | <5 | <5 |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <10 | <10 | <10 | <10 | <10 |
| trans-1,3-Dichloropropene | <10 | <10 | <10 | <10 | <10 |
| Trichloroethylene | <5 | <5 | <5 | <5 | <5 |
| Chlorodibromomethane | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <10 | <10 | <10 | <10 | <10 |
| cis-1,3-Dichloropropene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloroethyl vinyl ether | <10 | <10 | <10 | <10 | <10 |
| Bromoform | <10 | <10 | <10 | <10 | <10 |
| 1,1,2,2-Tetrachloroethane | <10 | <10 | <10 | <10 | <10 |
| Tetrachloroethene | <5 | <5 | <5 | <5 | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Benzene | <5 | <5 | <5 | <5 | <5 |
| Toluene | <10 | <10 | <10 | <10 | <10 |
| Ethyl benzene | <5 | <5 | <5 | <5 | <5 |
| m Xylene | <10 | <10 | <10 | <10 | <10 |
| o + p Xylene | <20 | <20 | <20 | <20 | <20 |
| Total VOCs | 0 | 0 | 0 | 0 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

Table 16A. Concentrations of Volatile Organic Compounds in Soil Samples Collected from Well Borings during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | SY-3D | SY-3D | SY-6D | SY-6D | SY-6D |
|---------------------------|---------|---------|--------|--------|--------|
| Sample Date: | 2/18/88 | 2/18/88 | 3/2/88 | 3/7/88 | 3/7/88 |
| Sample Depth (ft): | 153 | 183 | 33 | 63 | 93 |
| Parameter | | | | | |
| Chloromethane | <5 | <5 | <5 | <5 | <5 |
| Bromomethane | <5 | <5 | <5 | <5 | <5 |
| Dichlorodifluoromethane | <5 | <5 | <5 | <5 | <5 |
| Vinyl chloride | <5 | <5 | <5 | <5 | <5 |
| Chloroethane | <5 | <5 | <5 | <5 | <5 |
| Methylene chloride | <10 | <10 | <10 | <10 | <10 |
| Trichlorofluoromethane | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethene | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethane | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichloroethene | <10 | <10 | <10 | <10 | <10 |
| Chloroform | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <10 | <10 | <10 | <10 | <10 |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 |
| Carbon tetrachloride | <5 | <5 | <5 | <5 | <5 |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <10 | <10 | <10 | <10 | <10 |
| trans-1,3-Dichloropropene | <10 | <10 | <10 | <10 | <10 |
| Trichloroethylene | <5 | <5 | <5 | <5 | <5 |
| Chlorodibromomethane | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <10 | <10 | <10 | <10 | <10 |
| cis-1,3-Dichloropropene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloroethyl vinyl ether | <10 | <10 | <10 | <10 | <10 |
| Bromoform | <10 | <10 | <10 | <10 | <10 |
| 1,1,2,2-Tetrachloroethane | <10 | <10 | <10 | <10 | <10 |
| Tetrachloroethene | <5 | <5 | <10 | <10 | <10 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Benzene | <5 | <5 | <5 | <5 | <5 |
| Toluene | <10 | <10 | <10 | <10 | <10 |
| Ethyl benzene | <5 | <5 | <5 | <5 | <5 |
| m Xylene | <10 | <10 | <10 | <10 | <10 |
| o + p Xylene | <20 | <20 | <20 | <20 | <20 |
| Total VOCs | 0 | 0 | 0 | 0 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

Table 16A. Concentrations of Volatile Organic Compounds in Soil Samples Collected from Well Borings during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | SY-6D | SY-6D | SY-6D | SY-8 | SY-8 |
|---------------------------|--------|--------|--------|---------|----------|
| Sample Date: | 3/7/88 | 3/8/88 | 3/8/88 | 12/4/87 | 12/10/87 |
| Sample Depth (ft): | 123 | 153 | 183 | 30 | 60 |
| Parameter | | | | | |
| Chloromethane | <5 | <10 | <5 | <5 | <5 |
| Bromomethane | <5 | <10 | <5 | <5 | <5 |
| Dichlorodifluoromethane | <5 | <10 | <5 | <5 | <5 |
| Vinyl chloride | <5 | <10 | <5 | <5 | <5 |
| Chloroethane | <5 | <10 | <5 | <5 | <5 |
| Methylene chloride | <10 | <20 | <10 | <10 | <10 |
| Trichlorofluoromethane | <10 | <20 | <10 | <10 | <10 |
| 1,1-Dichloroethene | <10 | <20 | <10 | <10 | <10 |
| 1,1-Dichloroethane | <10 | <20 | <10 | <10 | <10 |
| 1,2-Dichloroethene | <10 | <20 | <10 | <10 | <10 |
| Chloroform | <5 | <10 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <10 | <20 | <10 | <10 | <10 |
| 1,1,1-Trichloroethane | <5 | <10 | <5 | <5 | <5 |
| Carbon tetrachloride | <5 | <10 | <5 | <5 | <5 |
| Bromodichloromethane | <5 | <10 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <10 | <20 | <10 | <10 | <10 |
| trans-1,3-Dichloropropene | <10 | <20 | <10 | <10 | <10 |
| Trichloroethylene | <5 | <10 | <5 | <5 | <5 |
| Chlorodibromomethane | <5 | <10 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <10 | <20 | <10 | <10 | <10 |
| cis-1,3-Dichloropropene | <10 | <20 | <10 | <10 | <10 |
| 2-Chloroethyl vinyl ether | <10 | <20 | <10 | <10 | <10 |
| Bromoform | <10 | <20 | <10 | <10 | <10 |
| 1,1,2,2-Tetrachloroethane | <10 | <20 | <10 | <10 | <10 |
| Tetrachloroethene | <10 | <20 | <10 | <5 | <5 |
| Chlorobenzene | <5 | <10 | <5 | 64 | <5 |
| 1,3-Dichlorobenzene | <10 | <20 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <20 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <20 | <10 | 230 | <10 |
| Benzene | <5 | <10 | <5 | <5 | <5 |
| Toluene | <10 | <20 | <10 | <10 | <10 |
| Ethyl benzene | <5 | <10 | <5 | 41 | <5 |
| m Xylene | <10 | <20 | <10 | <10 | <10 |
| o + p Xylene | <20 | <40 | <20 | <20 | <20 |
| Total VOCs | 0 | 0 | 0 | 335 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

Table 16A. Concentrations of Volatile Organic Compounds in Soil Samples Collected from Well Borings during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | SY-8 | SY-8 | SY-9 | SY-9 | SY-9 |
|---------------------------|----------|----------|---------|---------|---------|
| Sample Date: | 12/14/87 | 12/16/87 | 1/20/88 | 1/25/88 | 1/28/88 |
| Sample Depth (ft): | 90 | 120 | 30 | 60 | 90 |
| Parameter | | | | | |
| Chloromethane | <5 | <5 | <5 | <5 | <5 |
| Bromomethane | <5 | <5 | <5 | <5 | <5 |
| Dichlorodifluoromethane | <5 | <5 | <5 | <5 | <5 |
| Vinyl chloride | <5 | <5 | <5 | <5 | <5 |
| Chloroethane | <5 | <5 | <5 | <5 | <5 |
| Methylene chloride | <10 | <10 | <10 | <10 | <10 |
| Trichlorofluoromethane | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethene | <10 | <10 | <10 | <10 | <10 |
| 1,1-Dichloroethane | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichloroethene | <10 | <10 | <10 | <10 | <10 |
| Chloroform | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <10 | <10 | <10 | <10 | <10 |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 |
| Carbon tetrachloride | <5 | <5 | <5 | <5 | <5 |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <10 | <10 | <10 | <10 | <10 |
| trans-1,3-Dichloropropene | <10 | <10 | <10 | <10 | <10 |
| Trichloroethylene | <5 | <5 | <5 | <5 | <5 |
| Chlorodibromomethane | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <10 | <10 | <10 | <10 | <10 |
| cis-1,3-Dichloropropene | <10 | <10 | <10 | <10 | <10 |
| 2-Chloroethyl vinyl ether | <10 | <10 | <10 | <10 | <10 |
| Bromoform | <10 | <10 | <10 | <10 | <10 |
| 1,1,2,2-Tetrachloroethane | <10 | <10 | <10 | <10 | <10 |
| Tetrachloroethene | 9 | <5 | <5 | <5 | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Benzene | <5 | <5 | <5 | <5 | <5 |
| Toluene | <10 | <10 | <10 | <10 | <10 |
| Ethyl benzene | <5 | <5 | <5 | <5 | <5 |
| m Xylene | <10 | <10 | <10 | <10 | <10 |
| o + p Xylene | <20 | <20 | <20 | <20 | <20 |
| Total VOCs | 9 | 0 | 0 | 0 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

Table 16A. Concentrations of Volatile Organic Compounds in Soil Samples Collected from Well Borings during the On-Site Ground-Water Study, Syosset Landfill, Syosset, New York.

| | | |
|---------------------------|---------|---------|
| Sample Designation: | SY-9 | SY-9 |
| Sample Date: | 1/28/88 | 1/28/88 |
| Sample Depth (ft): | 120 | 180 |
| Parameter | | |
| Chloromethane | <5 | <5 |
| Bromomethane | <5 | <5 |
| Dichlorodifluoromethane | <5 | <5 |
| Vinyl chloride | <5 | <5 |
| Chloroethane | <5 | <5 |
| Methylene chloride | <10 | <10 |
| Trichlorofluoromethane | <10 | <10 |
| 1,1-Dichloroethene | <10 | <10 |
| 1,1-Dichloroethane | <10 | <10 |
| 1,2-Dichloroethene | <10 | <10 |
| Chloroform | 5 | <5 |
| 1,2-Dichloroethane | <10 | <10 |
| 1,1,1-Trichloroethane | <5 | <5 |
| Carbon tetrachloride | <5 | <5 |
| Bromodichloromethane | <5 | <5 |
| 1,2-Dichloropropane | <10 | <10 |
| trans-1,3-Dichloropropene | <10 | <10 |
| Trichloroethylene | <5 | <5 |
| Chlorodibromomethane | <5 | <5 |
| 1,1,2-Trichloroethane | <10 | <10 |
| cis-1,3-Dichloropropene | <10 | <10 |
| 2-Chloroethyl vinyl ether | <10 | <10 |
| Bromoform | <10 | <10 |
| 1,1,2,2-Tetrachloroethane | <10 | <10 |
| Tetrachloroethene | <5 | <5 |
| Chlorobenzene | <5 | <5 |
| 1,3-Dichlorobenzene | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 |
| Benzene | <5 | <5 |
| Toluene | <10 | <10 |
| Ethyl benzene | <5 | <5 |
| m Xylene | <10 | <10 |
| o + p Xylene | <20 | <20 |
| Total VOCs | 5 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

Table 17. Concentrations of PCBs in Soil Samples Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Parameter | Sample Designation: | | | | | | | | | | | |
|--------------------|---------------------|----------|----------|---------|---------|---------|---------|---------|---------|---------|------------------|----------|
| | B-1 | B-1 | B-1 | B-2 | B-2 | B-2 | B-2 | B-3 | B-3 | B-3 | B-4 | B-4 |
| Sample Date: | 10/29/87 | 10/30/87 | 10/30/87 | 11/3/87 | 11/4/87 | 11/4/87 | 11/4/87 | 11/7/87 | 11/9/87 | 11/9/87 | 11/16/87 | 11/17/87 |
| Sample Depth (ft): | 15 | 40 | 55 | 30 | 60 | 85 | 40 | 80 | 110 | 40 | 70 | 100 |
| Aroclor 1016 | 430 | 200 | <40 | <40 | <40 | <40,000 | <1,000 | <40 | <40 | 3,100 | 390 | 110 |
| Aroclor 1221 | <200 | <40 | <40 | <40 | <40 | <40,000 | <1,000 | <40 | <40 | <1,000 | <40 | <40 |
| Aroclor 1232 | <200 | <40 | <40 | <40 | <40 | <40,000 | <1,000 | <40 | <40 | <1,000 | <40 | <40 |
| Aroclor 1242 | <200 | <40 | <40 | <40 | <40 | <40,000 | <1,000 | <40 | <40 | <1,000 | <40 | <40 |
| Aroclor 1248 | <200 | <40 | <40 | <40 | <40 | <40,000 | <1,000 | <40 | <40 | <1,000 | <40 ^a | <40 |
| Aroclor 1254 | 300 | 180 | <40 | <40 | <40 | <40,000 | <1,000 | <40 | <40 | 1,500 | 170 | 61 |
| Aroclor 1260 | <200 | <40 | <40 | <40 | <40 | <40,000 | <1,000 | <40 | <40 | <1,000 | <40 | <40 |
| Total PCBs | 730 | 380 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,600 | 560 | 171 |

All results reported in micrograms per kilogram (ug/kg).
 Samples analyzed using USEPA Method 608 by EcoTest Laboratories, Inc., North Babylon, New York.

Table 18. Concentrations of Base/Neutral Compounds Detected in Soil Samples, Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | B-1 | B-1 | B-1 | B-2 | B-2 |
|-----------------------------|----------|----------|----------|---------|---------|
| Sample Date: | 10/29/87 | 10/30/87 | 10/30/87 | 11/3/87 | 11/4/87 |
| Sample Depth (ft): | 15 | 40 | 55 | 30 | 60 |
| Parameter | | | | | |
| N-nitrosodimethylamine | <20000 | <420 | <360 | <28000 | <350 |
| bis(2-Chloroethyl)ether | <20000 | <420 | <360 | <28000 | <350 |
| 1,3-Dichlorobenzene | <20000 | <420 | <360 | <28000 | <350 |
| 1,4-Dichlorobenzene | <20000 | <420 | <360 | <28000 | <350 |
| 1,2-Dichlorobenzene | <20000 | 20 J | <360 | <28000 | <350 |
| bis(2-Chloroisopropyl)ether | <20000 | <420 | <360 | <28000 | <350 |
| Hexachloroethane | <20000 | <420 | <360 | <28000 | <350 |
| N-nitroso-di-n-propylamine | <20000 | <420 | <360 | <28000 | <350 |
| Nitrobenzene | <20000 | <420 | <360 | <28000 | <350 |
| Isophorone | <20000 | <420 | <360 | <28000 | <350 |
| bis(2-Chloroethoxy)methane | <20000 | <420 | <360 | <28000 | <350 |
| 1,2,4-Trichlorobenzene | <20000 | <420 | <360 | <28000 | <350 |
| Naphthalene | <20000 | 610 | <360 | 24000 J | 30 J |
| Hexachlorobutadiene | <20000 | <420 | <360 | <28000 | <350 |
| Hexachlorocyclopentadiene | <20000 | <420 | <360 | <28000 | <350 |
| 2-Chloroanphthalene | <20000 | <420 | <360 | <28000 | <350 |
| Dimethyl phthalate | <20000 | <420 | <360 | 4400 J | <350 |
| Acenaphthylene | <20000 | <420 | <360 | <28000 | <350 |
| 2,6-Dinitrotoluene | <20000 | <420 | <360 | <28000 | <350 |
| Acenaphthene | 1100 J | 41 J | <360 | 7200 J | 19 J |
| 2,4-Dinitrotoluene | <20000 | <420 | <360 | <28000 | <350 |
| Diethyl phthalate | <20000 | 12 J | <360 | 40000 | <350 |
| Fluorene | 990 J | 62 J | <360 | 5600 J | 29 J |
| 4-Chlorophenyl phenyl ether | <20000 | <420 | <360 | <28000 | <350 |
| 4-Bromophenyl phenyl ether | <20000 | <420 | <360 | <28000 | <350 |
| N-nitrosodiphenylamine | <20000 | <420 | <360 | <28000 | <350 |
| Hexachlorobenzene | <20000 | <420 | <360 | <28000 | <350 |
| Phenanthrene | 2900 J | 210 J | 34 J | 9700 J | 87 J |
| Anthracene | 650 J | 42 J | <360 | <28000 | <350 |
| Di-n-butyl phthalate | <20000 | 220 JB | 550 B | 610 J | 110 JB |
| Fluoranthene | 2700 J | 180 J | 78 J | 7400 J | 49 J |
| Benzidine | <20000 | <420 | <360 | <28000 | <350 |
| Pyrene | 1900 J | 100 J | 41 J | 3400 J | 22 J |
| Butyl benzyl phthalate | <20000 | 160 J | <360 | <28000 | <350 |
| 3,3'-Dichlorobenzidine | <40000 | <840 | <720 | <56000 | <700 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 625 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

Table 18. Concentrations of Base/Neutral Compounds Detected in Soil Samples, Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | B-1 | B-1 | B-1 | B-2 | B-2 |
|------------------------------|----------|----------|----------|---------|---------|
| Sample Date: | 10/29/87 | 10/30/87 | 10/30/87 | 11/3/87 | 11/4/87 |
| Sample Depth (ft): | 15 | 40 | 55 | 30 | 60 |
| Parameter | | | | | |
| Chrysene | <20000 | 64 J | <360 | <28000 | <350 |
| Benzo(a)anthracene | <20000 | 59 J | <360 | <28000 | <350 |
| bis(2-Ethylhexyl)phthalate | <20000 | 310 JB | <360 | <28000 | <350 |
| di-n-octyl phthalate | <20000 | <420 | <360 | 27000 J | <350 |
| Benzo(b)fluoranthene | <20000 | <420 | <360 | 2600 J | <350 |
| Benzo(k)fluoranthene | <20000 | <420 | <360 | <28000 | <350 |
| Benzo(a)pyrene | <20000 | 40 J | 27 J | 1400 J | <350 |
| Benzo(g,h,i)perylene | <20000 | <420 | <360 | <28000 | <350 |
| Dibenzo(a,h)anthracene | <20000 | <420 | <360 | <28000 | <350 |
| Indeno(1,2,3-c,d)pyrene | <20000 | 22 J | <360 | <28000 | <350 |
| 1,2-Diphenylhydrazine | <20000 | <420 | <360 | <28000 | <350 |
| Total Base Neutral Compounds | 0 | 610 | 0 | 40000 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 625 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

Table 18. Concentrations of Base/Neutral Compounds Detected in Soil Samples, Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | B-2 | B-2 | B-3 | B-3 | B-3 |
|-----------------------------|---------|------------|---------|---------|---------|
| Sample Date: | 11/4/87 | 10/27/87 | 11/7/87 | 11/9/87 | 11/9/87 |
| Sample Depth (ft): | 85 | Trip Blank | 40 | 80 | 110 |
| Parameter | | | | | |
| N-nitrosodimethylamine | <370 | NA | <390 | <370 | <410 |
| bis(2-Chloroethyl)ether | <370 | NA | <390 | <370 | <410 |
| 1,3-Dichlorobenzene | <370 | NA | <390 | <370 | <410 |
| 1,4-Dichlorobenzene | <370 | NA | <390 | <370 | <410 |
| 1,2-Dichlorobenzene | <370 | NA | <390 | <370 | <410 |
| bis(2-Chloroisopropyl)ether | <370 | NA | <390 | <370 | <410 |
| Hexachloroethane | <370 | NA | <390 | <370 | <410 |
| N-nitroso-di-n-propylamine | <370 | NA | <390 | <370 | <410 |
| Nitrobenzene | <370 | NA | <390 | <370 | <410 |
| Isophorone | <370 | NA | <390 | <370 | <410 |
| bis(2-Chloroethoxy)methane | <370 | NA | <390 | <370 | <410 |
| 1,2,4-Trichlorobenzene | <370 | NA | <390 | <370 | <410 |
| Naphthalene | <370 | NA | 90 J | <370 | <410 |
| Hexachlorobutadiene | <370 | NA | <390 | <370 | <410 |
| Hexachlorocyclopentadiene | <370 | NA | <390 | <370 | <410 |
| 2-Chloroanphthalene | <370 | NA | <390 | <370 | <410 |
| Dimethyl phthalate | <370 | NA | <390 | <370 | <410 |
| Acenaphthylene | <370 | NA | 250 J | <370 | <410 |
| 2,6-Dinitrotoluene | <370 | NA | <390 | <370 | <410 |
| Acenaphthene | <370 | NA | 560 | <370 | <410 |
| 2,4-Dinitrotoluene | <370 | NA | <390 | <370 | <410 |
| Diethyl phthalate | <370 | NA | 380 J | <370 | <410 |
| Fluorene | <370 | NA | 840 | <370 | <410 |
| 4-Chlorophenyl phenyl ether | <370 | NA | <390 | <370 | <410 |
| 4-Bromophenyl phenyl ether | <370 | NA | <390 | <370 | <410 |
| N-nitrosodiphenylamine | <370 | NA | 180 J | <370 | <410 |
| Hexachlorobenzene | <370 | NA | <390 | <370 | <410 |
| Phenanthrene | <370 | NA | 2200 | <370 | <410 |
| Anthracene | <370 | NA | 640 | <370 | <410 |
| Di-n-butyl phthalate | 13 JB | NA | 220 JB | 78 JB | 50 JB |
| Fluoranthene | <370 | NA | 2100 | <370 | <410 |
| Benzidine | <370 | NA | <390 | <370 | <410 |
| Pyrene | <370 | NA | 1200 | <370 | <410 |
| Butyl benzyl phthalate | <370 | NA | <390 | <370 | <410 |
| 3,3'-Dichlorobenzidine | <740 | NA | <780 | <740 | <820 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 625 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

NA Not analyzed.

Table 18. Concentrations of Base/Neutral Compounds Detected in Soil Samples, Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | B-2 | B-2 | B-3 | B-3 | B-3 |
|------------------------------|---------|------------|---------|---------|---------|
| Sample Date: | 11/4/87 | 10/27/87 | 11/7/87 | 11/9/87 | 11/9/87 |
| Sample Depth (ft): | 85 | Trip Blank | 40 | 80 | 110 |
| Parameter | | | | | |
| Chrysene | <370 | NA | 630 | <370 | <410 |
| Benzo(a)anthracene | <370 | NA | 610 | <370 | <410 |
| bis(2-Ethylhexyl)phthalate | <370 | NA | 1100 B | 650 B | 1100 B |
| di-n-octyl phthalate | <370 | NA | <390 | <370 | 8 J |
| Benzo(b)fluoranthene | <370 | NA | 710 | <370 | <410 |
| Benzo(k)fluoranthene | <370 | NA | <390 | <370 | <410 |
| Benzo(a)pyrene | <370 | NA | 440 | <370 | <410 |
| Benzo(g,h,i)perylene | <370 | NA | 180 J | <370 | <410 |
| Dibenzo(a,h)anthracene | <370 | NA | <390 | <370 | <410 |
| Indeno(1,2,3-c,d)pyrene | <370 | NA | 170 J | <370 | <410 |
| 1,2-Diphenylhydrazine | <370 | NA | <390 | <370 | <410 |
| Total Base Neutral Compounds | 0 | NA | 9930 | 0 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 625 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

NA Not analyzed.

Table 18. Concentrations of Base/Neutral Compounds Detected in Soil Samples, Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: B-3 (REP 1) B-3 (REP 2) B-4 B-4 B-4 | | | | | |
|---|-------|-------|--------|-------|-------|
| Sample Date: 11/9/87 11/9/87 11/16/87 11/17/87 11/17/87 | | | | | |
| Sample Depth (ft): 110 110 40 70 100 | | | | | |
| Parameter | | | | | |
| N-nitrosodimethylamine | <400 | <410 | <4500 | <380 | <420 |
| bis(2-Chloroethyl)ether | <400 | <410 | <4500 | <380 | <420 |
| 1,3-Dichlorobenzene | <400 | <410 | <4500 | <380 | <420 |
| 1,4-Dichlorobenzene | <400 | <410 | <4500 | <380 | <420 |
| 1,2-Dichlorobenzene | <400 | <410 | <4500 | <380 | <420 |
| bis(2-Chloroisopropyl)ether | <400 | <410 | <4500 | <380 | <420 |
| Hexachloroethane | <400 | <410 | <4500 | <380 | <420 |
| N-nitroso-di-n-propylamine | <400 | <410 | <4500 | <380 | <420 |
| Nitrobenzene | <400 | <410 | <4500 | <380 | <420 |
| Isophorone | <400 | <410 | <4500 | <380 | <420 |
| bis(2-Chloroethoxy)methane | <400 | <410 | <4500 | <380 | <420 |
| 1,2,4-Trichlorobenzene | <400 | <410 | <4500 | <380 | <420 |
| Naphthalene | <400 | <410 | 830 J | 14 J | <420 |
| Hexachlorobutadiene | <400 | <410 | <4500 | <380 | <420 |
| Hexachlorocyclopentadiene | <400 | <410 | <4500 | <380 | <420 |
| 2-Chloroanaphthalene | <400 | <410 | <4500 | <380 | <420 |
| Dimethyl phthalate | <400 | <410 | <4500 | <380 | <420 |
| Acenaphthylene | <400 | <410 | <4500 | <380 | <420 |
| 2,6-Dinitrotoluene | <400 | <410 | <4500 | <380 | <420 |
| Acenaphthene | <400 | <410 | 2200 J | 32 J | <420 |
| 2,4-Dinitrotoluene | <400 | <410 | <4500 | <380 | <420 |
| Diethyl phthalate | <400 | <410 | <4500 | <380 | 22 JB |
| Fluorene | <400 | <410 | 2200 J | 30 J | <420 |
| 4-Chlorophenyl phenyl ether | <400 | <410 | <4500 | <380 | <420 |
| 4-Bromophenyl phenyl ether | <400 | <410 | <4500 | <380 | <420 |
| N-nitrosodiphenylamine | <400 | <410 | <4500 | <380 | <420 |
| Hexachlorobenzene | <400 | <410 | <4500 | <380 | <420 |
| Phenanthrene | <400 | <410 | 8400 | 170 J | 19 J |
| Anthracene | <400 | <410 | 2300 J | 47 J | <420 |
| Di-n-butyl phthalate | 41 JB | 78 JB | 300 JB | 29 JB | 35 JB |
| Fluoranthene | <400 | <410 | 9000 | 240 J | 27 J |
| Benzidine | <400 | <410 | <4500 | <380 | <420 |
| Pyrene | <400 | <410 | 3900 J | 140 J | 16 J |
| Butyl benzyl phthalate | <400 | <410 | <4500 | <380 | <420 |
| 3,3'-Dichlorobenzidine | <800 | <830 | <9100 | <750 | <840 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 625 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

Table 18. Concentrations of Base/Neutral Compounds Detected in Soil Samples, Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: B-3 (REP 1) B-3 (REP 2) B-4 B-4 B-4 | | | | | |
|---|--------|--------|---------|-------|-------|
| Sample Date: 11/9/87 11/9/87 11/16/87 11/17/87 11/17/87 | | | | | |
| Sample Depth (ft): 110 110 40 70 100 | | | | | |
| Parameter | | | | | |
| Chrysene | <400 | <410 | 3300 J | 100 J | <420 |
| Benzo(a)anthracene | <400 | <410 | 3300 J | 100 J | <420 |
| bis(2-Ethylhexyl)phthalate | 1100 B | 1800 B | 47000 B | 840 B | 960 B |
| di-n-octyl phthalate | <400 | <410 | <4500 | 8 J | <420 |
| Benzo(b)fluoranthene | <400 | <410 | 3800 J | <380 | <420 |
| Benzo(k)fluoranthene | <400 | <410 | <4500 | <380 | <420 |
| Benzo(a)pyrene | <400 | <410 | 2500 J | 86 J | <420 |
| Benzo(g,h,i)perylene | <400 | <410 | 2200 J | <380 | <420 |
| Dibenzo(a,h)anthracene | <400 | <410 | <4500 | <380 | <420 |
| Indeno(1,2,3-c,d)pyrene | <400 | <410 | 2000 J | <380 | <420 |
| 1,2-Diphenylhydrazine | <400 | <410 | <4500 | <380 | <420 |
| Total Base Neutral Compounds | 0 | 0 | 17400 | 0 | 0 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 625 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

Table 19. Concentrations of Acid Extractable Compounds in Soil Samples
Collected from Soil Borings during the Landfill Dimension Study,
Syosset Landfill, Syosset, New York.

| | | | | | |
|----------------------------|----------|----------|----------|---------|---------|
| Sample Designation: | B-1 | B-1 | B-1 | B-2 | B-2 |
| Sample Date: | 10/29/87 | 10/30/87 | 10/30/87 | 11/3/87 | 11/4/87 |
| Sample Depth (ft): | 15 | 40 | 55 | 30 | 60 |
| Parameter | | | | | |
| Phenol | <20000 | <420 | <360 | <28000 | <350 |
| 2-Chlorophenol | <20000 | <420 | <360 | <28000 | <350 |
| 2-Nitrophenol | <20000 | <420 | <360 | <28000 | <350 |
| 2,4-Dimethylphenol | <20000 | <420 | <360 | <28000 | <350 |
| 2,4-Dichlorophenol | <20000 | <420 | <360 | <28000 | <350 |
| 4-Chloro-3-methyl phenol | <20000 | <420 | <360 | <28000 | <350 |
| 2,4,6-Trichlorophenol | <20000 | <420 | <360 | <28000 | <350 |
| 2,4-Dinitrophenol | <96000 | <2100 | <1700 | <130000 | <1700 |
| 4-Nitrophenol | <96000 | <2100 | <1700 | <130000 | <1700 |
| 2-Methyl-4,6-dinitrophenol | <96000 | <2100 | <1700 | <130000 | <1700 |
| Pentachlorophenol | <96000 | <2100 | <1700 | <130000 | <1700 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 625 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

NA Not analyzed.

Table 19. Concentrations of Acid Extractable Compounds in Soil Samples
Collected from Soil Borings during the Landfill Dimension Study,
Syosset Landfill, Syosset, New York.

| | | | | | |
|----------------------------|---------|---------|---------|---------|-------------|
| Sample Designation: | B-2 | B-3 | B-3 | B-3 | B-3 (REP 1) |
| Sample Date: | 11/4/87 | 11/7/87 | 11/9/87 | 11/9/87 | 11/9/87 |
| Sample Depth (ft): | 85 | 40 | 80 | 110 | 110 |
| Parameter | | | | | |
| Phenol | <370 | <390 | <370 | <410 | <400 |
| 2-Chlorophenol | <370 | <390 | <370 | <410 | <400 |
| 2-Nitrophenol | <370 | <390 | <370 | <410 | <400 |
| 2,4-Dimethylphenol | <370 | <390 | <370 | <410 | <400 |
| 2,4-Dichlorophenol | <370 | <390 | <370 | <410 | <400 |
| 4-Chloro-3-methyl phenol | <370 | <390 | <370 | <410 | <400 |
| 2,4,6-Trichlorophenol | <370 | <390 | <370 | <410 | <400 |
| 2,4-Dinitrophenol | <1800 | <1900 | <1800 | <2000 | <1900 |
| 4-Nitrophenol | <1800 | <1900 | <1800 | <2000 | <1900 |
| 2-Methyl-4,6-dinitrophenol | <1800 | <1900 | <1800 | <2000 | <1900 |
| Pentachlorophenol | <1800 | <1900 | <1800 | <2000 | <1900 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 625 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

NA Not analyzed.

Table 19. Concentrations of Acid Extractable Compounds in Soil Samples
Collected from Soil Borings during the Landfill Dimension Study,
Syosset Landfill, Syosset, New York.

| Sample Designation: B-3 (REP 2) | | B-4 | B-4 | B-4 |
|---------------------------------|-------|---------|----------|----------|
| Sample Date: | | 11/9/87 | 11/16/87 | 11/17/87 |
| Sample Depth (ft): | | 110 | 40 | 70 |
| Sample Depth (ft): | | 110 | 40 | 100 |
| Parameter | | | | |
| Phenol | <410 | <4500 | <380 | <420 |
| 2-Chlorophenol | <410 | <4500 | <380 | <420 |
| 2-Nitrophenol | <410 | <4500 | <380 | <420 |
| 2,4-Dimethylphenol | <410 | <4500 | <380 | <420 |
| 2,4-Dichlorophenol | <410 | <4500 | <380 | <420 |
| 4-Chloro-3-methyl phenol | <410 | <4500 | <380 | <420 |
| 2,4,6-Trichlorophenol | <410 | <4500 | <380 | <420 |
| 2,4-Dinitrophenol | <2000 | <22000 | <1800 | <2000 |
| 4-Nitrophenol | <2000 | <22000 | <1800 | <2000 |
| 2-Methyl-4,6-dinitrophenol | <2000 | <22000 | <1800 | <2000 |
| Pentachlorophenol | <2000 | <22000 | <1800 | <2000 |

All results reported in micrograms per kilogram (ug/kg).

Samples analyzed using USEPA Method 625 by York Laboratories, Inc., Monroe, Connecticut.

J Estimated value; less than the detection limit, but greater than zero.

B Analyte detected in the blank as well as in the sample.

NA Not analyzed.

Table 20. Concentrations of Leachable Metals in Soil Samples Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | | B-1 | B-1 | B-1 | B-2 | B-2 | B-2 | B-3 | B-3 |
|--|-------|-------------|----------|----------|---------|---------|---------|---------|---------|
| Sample Date: | | 10/29/87 | 10/30/87 | 10/30/87 | 11/3/87 | 11/4/87 | 11/4/87 | 11/7/87 | 11/9/87 |
| Sample Depth (ft): | | 15 | 40 | 55 | 30 | 60 | 85 | 40 | 80 |
| Maximum Concentration of Contaminants for Characteristic of Parameter | | EP Toxicity | | | | | | | |
| Antimony as Sb | | <5 | <5 | <5 | <5 | <5 | 64 | 12 | <5 |
| Arsenic as As | 5,000 | 2 | 4 | 2 | <2 | <2 | 20 | 8 | <2 |
| Beryllium as Be | | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Cadmium as Cd | 1,000 | <1 | <1 | <1 | <1 | <1 | <1 | 2 | <1 |
| Chromium as Cr | 5,000 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 |
| Copper as Cu | | 20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 |
| Lead as Pb | 5,000 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Mercury as Hg | 200 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Nickel as Ni | | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 |
| Selenium as Se | 1,000 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Silver as Ag | 5,000 | <10 | <10 | <10 | <10 | <10 | <10 | 20 | <10 |
| Thallium as Tl | | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Zinc as Zn | | 100 | 460 | 50 | 50 | 70 | 70 | 700 | 30 |

All results reported in micrograms per liter (ug/L).

Samples analyzed by Extraction Procedure (EP) Testing by EcoTest Laboratories, Inc., North Babylon, New York.

Table 20. Concentrations of Leachable Metals in Soil Samples Collected from Soil Borings during the Landfill Dimension Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | -- Replicates -- | | | | |
|---------------------|--|---------|----------|----------|----------|
| | B-3 | B-3 | B-4 | B-4 | B-4 |
| Sample Date: | 11/9/87 | 11/9/87 | 11/16/87 | 11/16/87 | 11/17/87 |
| Sample Depth (ft): | 110 | 110 | 40 | 70 | 100 |
| Parameter | Maximum Concentration of Contaminants for Characteristic of EP Toxicity | | | | |
| | | | | | |
| Antimony as Sb | | <5 | 34 | <5 | <5 |
| Arsenic as As | 5,000 | <2 | <2 | <2 | 7 |
| Beryllium as Be | | <1 | <1 | <1 | <1 |
| Cadmium as Cd | 1,000 | <1 | <1 | <1 | <1 |
| Chromium as Cr | 5,000 | <20 | <20 | <20 | <20 |
| Copper as Cu | | <20 | 30 | <20 | <20 |
| Lead as Pb | 5,000 | <5 | <5 | <5 | <5 |
| Mercury as Hg | 200 | <0.2 | <0.2 | <0.2 | <0.2 |
| Nickel as Ni | | <100 | <100 | <100 | <100 |
| Selenium as Se | 1,000 | <2 | <2 | <2 | <2 |
| Silver as Ag | 5,000 | <10 | 10 | 10 | <10 |
| Thallium as Tl | | <5 | <5 | <5 | <5 |
| Zinc as Zn | | 30 | 100 | <20 | <20 |

All results reported in micrograms per liter (ug/L).

Samples analyzed by Extraction Procedure (EP) Testing by EcoTest Laboratories, Inc., North Babylon, New York.

Table 21. Summary of Gas Well Monitoring Data at Syosset Landfill, Syosset, New York.

| Well Number | -----5-8-87----- | | | -----5-14-87----- | | | -----5-18-87----- | | | -----5-29-87----- | | |
|----------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|
| | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) |
| G-1 | >1000 | >1000 | 30.02 | 0 | 0 | 30.36 | 24 | 22 | 29.82 | 1.5 | 0 | 29.98 |
| G-2 | >1000 | >1000 | | >1000 | >1000 | | 0 | 0 | | 0 | 0 | |
| G-3 | 0 | 0 | | 0 | 0 | | >1000 | >1000 | | 0 | 0 | |
| G-4 | 0 | 12 | | 0 | 2.2 | | 0 | 0 | | 0 | 0 | |
| G-5 | 0 | 10 | | 0 | 2.2 | | 0 | 0.6 | | 0 | 0 | |
| G-6 | 0 | 5 | | 0 | 3.6 | | 0 | 0 | | 0 | 0 | |
| G-7 | >1000 | >1000 | | >1000 | >1000 | | >1000 | >1000 | | 0 | 0 | |
| G-8 | >1000 | >1000 | | 2.6 | 7 | | >1000 | >1000 | | 18 | 260 | |
| G-9 | >1000 | >1000 | | 0 | 0 | | >1000 | >1000 | | >1000 | >1000 | |
| G-10 | 11 | 28 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-11 | 5 | 7 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-12 | 8 | 4 | | 0 | 3.8 | | 0 | 0.6 | | 0 | 0 | |
| G-13 | 180 | 220 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-14 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-15 | >1000 | >1000 | | >1000 | >1000 | | >1000 | >1000 | | >1000 | >1000 | |
| G-16 | >1000 | >1000 | | 0 | 3.8 | | 20 | 12 | | >1000 | >1000 | |
| G-17 | >1000 | >1000 | | >1000 | >1000 | | >1000 | >1000 | | >1000 | >1000 | |
| G-18 | >1000 | >1000 | | >1000 | >1000 | | >1000 | >1000 | | 24 | 380 | |
| G-19 | >1000 | >1000 | | >1000 | >1000 | | >1000 | >1000 | | >1000 | >1000 | |

All results reported in parts per million (ppm).

Measurements conducted in the field with a Century Systems Model 118 (upper detection limit 1,000 ppm) or 88 (upper detection limit 100,000 ppm) Organic Vapor Analyzer (OVA). Instruments were calibrated using a methane standard.

(a) Measurements made using standard OVA probe.

(b) Measurements made using activated charcoal filter probe to absorb non-methane volatile organic compounds.

(c) Inches of mercury. Readings obtained from local weather service (Compu Weather, Inc., Flushing, New York, or Newsday) before sampling, or from New York Flight Service, Islip, New York at 5 pm on the day of sampling, or from Long Island Weather observers, Mineola, New York at 6 pm on the day of sampling.

* Gas well destroyed.

Table 21. Summary of Gas Well Monitoring Data at Syosset Landfill, Syosset, New York.

| Well Number | -----6-15-87----- | | | -----6-23-87----- | | | -----7-2-87----- | | | -----8-21-87----- | | |
|----------------|-------------------------|-------------|----------------------------|-------------------------|-------------|----------------------------|-------------------------|-------------|----------------------------|-------------------------|-------------|----------------------------|
| | Total | | Barometric Pressure (c) | Total | | Barometric Pressure (c) | Total | | Barometric Pressure (c) | Total | | Barometric Pressure (c) |
| | Non-Methane VOCs (a) | Methane (b) | | Non-Methane VOCs (a) | Methane (b) | | Non-Methane VOCs (a) | Methane (b) | | Non-Methane VOCs (a) | Methane (b) | |
| G-1 | 0 | 0 | 29.70 | 0 | 0 | 30.00 | 0 | 0 | 29.80 | 0 | | 30.14 |
| G-2 | 0 | 0 | | >1000 | >1000 | | 100 | 100 | | 0 | | |
| G-3 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-4 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-5 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-6 | 0 | 0 | | 0 | 0 | | 0 | 0 | | >1000 | | |
| G-7 | >1000 | >1000 | | >1000 | >1000 | | 250 | 200 | | 0 | | |
| G-8 | >1000 | >1000 | | 14 | 14 | | 0 | 0 | | 0 | | |
| G-9 | >1000 | >1000 | | 65 | 75 | | * | * | | * | | |
| G-10 | 200 | 200 | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-11 | 60 | 40 | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-12 | 60 | 65 | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-13 | 0 | 0 | | 0 | 0 | | 0 | 0 | | * | | |
| G-14 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-15 | >1000 | >1000 | | >1000 | >1000 | | >1000 | >1000 | | 0 | | |
| G-16 | 450 | 450 | | 3 | 3 | | 20 | 15 | | 0 | | |
| G-17 | >1000 | >1000 | | >1000 | >1000 | | >1000 | >1000 | | >1000 | | |
| G-18 | 250 | 250 | | 0 | 0 | | 100 | 100 | | 0 | | |
| G-19 | 6 | 20 | | >1000 | >1000 | | >1000 | >1000 | | >1000 | | |

All results reported in parts per million (ppm).

Measurements conducted in the field with a Century Systems Model 118 (upper detection limit 1,000 ppm) or 88 (upper detection limit 100,000 ppm) Organic Vapor Analyzer (OVA). Instruments were calibrated using a methane standard.

(a) Measurements made using standard OVA probe.

(b) Measurements made using activated charcoal filter probe to absorb non-methane volatile organic compounds.

(c) Inches of mercury. Readings obtained from local weather service (Compu Weather, Inc., Flushing, New York, or Newsday) before sampling, or from New York Flight Service, Islip, New York at 5 pm on the day of sampling, or from Long Island Weather observers, Mineola, New York at 6 pm on the day of sampling.

* Gas well destroyed.

Table 21. Summary of Gas Well Monitoring Data at Syosset Landfill, Syosset, New York.

| | -----8-25-87----- | | | -----9-8-87----- | | | -----10-15-87----- | | | -----10-22-87----- | | |
|--------|-------------------|-------------|------------|------------------|-------------|------------|--------------------|-------------|------------|--------------------|-------------|------------|
| Well | Total | | Barometric | Total | | Barometric | Total | | Barometric | Total | | Barometric |
| Number | Non-Methane | | Pressure | Non-Methane | | Pressure | Non-Methane | | Pressure | Non-Methane | | Pressure |
| | VOCs (a) | Methane (b) | (c) | VOCs (a) | Methane (b) | (c) | VOCs (a) | Methane (b) | (c) | VOCs (a) | Methane (b) | (c) |
| G-1 | 0 | | 30.20 | 0 | 0 | 29.90 | 0 | 0 | 30.17 | 0 | | 29.95 |
| G-2 | 0 | | | >1000 | >1000 | | 0 | 0 | | 1000 | | |
| G-3 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-4 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-5 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-6 | 0 | | | 0 | 0 | | 3 | 3 | | 0 | | |
| G-7 | >1000 | | | >1000 | >1000 | | >1000 | >1000 | | 20000 | | |
| G-8 | 0 | | | >1000 | >1000 | | 20 | 15 | | 5 | | |
| G-9 | * | | | * | * | | * | * | | * | | |
| G-10 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-11 | * | | | * | * | | * | * | | * | | |
| G-12 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-13 | * | | | * | * | | * | * | | * | | |
| G-14 | 0 | | | 0 | 0 | | 0 | 0 | | 5 | | |
| G-15 | 0 | | | 70 | 60 | | 0 | 0 | | 30 | | |
| G-16 | 0 | | | 0 | 0 | | 0 | 0 | | * | | |
| G-17 | 0 | | | 0 | 0 | | 0 | 0 | | 1000 | | |
| G-18 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | | |
| G-19 | 0 | | | >1000 | >1000 | | 0 | 0 | | * | | |

All results reported in parts per million (ppm).

Measurements conducted in the field with a Century Systems Model 118 (upper detection limit 1,000 ppm) or 88 (upper detection limit 100,000 ppm) Organic Vapor Analyzer (OVA). Instruments were calibrated using a methane standard.

(a) Measurements made using standard OVA probe.

(b) Measurements made using activated charcoal filter probe to absorb non-methane volatile organic compounds.

(c) Inches of mercury. Readings obtained from local weather service (Compu Weather, Inc., Flushing, New York, or Newsday) before sampling, or from New York Flight Service, Islip, New York at 5 pm on the day of sampling, or from Long Island Weather observers, Mineola, New York at 6 pm on the day of sampling.

* Gas well destroyed.

** Gas well re-established.

Table 21. Summary of Gas Well Monitoring Data at Syosset Landfill, Syosset, New York.

| Well Number | -----12-3-87----- | | | -----12-14-87----- | | | -----12-23-87----- | | | -----12-29-87----- | | |
|----------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|
| | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) |
| G-1 | 0 | | 29.90 | 0 | | 29.50 | 0 | | 30.36 | 30 | | 29.77 |
| G-2 | >100000 | | | >100000 | | | >100000 | | | >100000 | | |
| G-3 | 0 | | | 0 | | | 0 | | | 0 | | |
| G-4 | 0 | | | 0 | | | 0 | | | 0 | | |
| G-5 | 0 | | | 0 | | | 0 | | | 0 | | |
| G-6 | 0 | | | 0 | | | 0 | | | 0 | | |
| G-7 | >100000 | | | 50 | | | >100000 | | | >100000 | | |
| G-8 | >100000 | | | 0 | | | >100000 | | | >100000 | | |
| G-9 | ** | 20000 | | * | | | ** | >100,000 | | >100000 | | |
| G-10 | 0 | | | 0 | | | 0 | | | 0 | | |
| G-11 | * | | | * | | | ** | | | 0 | | |
| G-12 | 0 | | | 0 | | | 0 | | | 0 | | |
| G-13 | * | | | * | | | ** | | | 0 | | |
| G-14 | 0 | | | 0 | | | 0 | | | 0 | | |
| G-15 | 40 | | | 0 | | | 0 | | | 40000 | | |
| G-16 | * | | | * | | | * | | | * | | |
| G-17 | >100000 | | | 22000 | | | >100000 | | | 1000 | | |
| G-18 | 45 | | | 50 | | | 2000 | | | 1000 | | |
| G-19 | * | | | * | | | * | | | * | | |

All results reported in parts per million (ppm).

Measurements conducted in the field with a Century Systems Model 118 (upper detection limit 1,000 ppm) or 88 (upper detection limit 100,000 ppm) Organic Vapor Analyzer (OVA). Instruments were calibrated using a methane standard.

(a) Measurements made using standard OVA probe.

(b) Measurements made using activated charcoal filter probe to absorb non-methane volatile organic compounds.

(c) Inches of mercury. Readings obtained from local weather service (Compu Weather, Inc., Flushing, New York, or Newsday) before sampling, or from New York Flight Service, Islip, New York at 5 pm on the day of sampling, or from Long Island Weather observers, Mineola, New York at 6 pm on the day of sampling.

* Gas well destroyed.

** Gas well re-established.

Table 21. Summary of Gas Well Monitoring Data at Syosset Landfill, Syosset, New York.

| Well Number | -----1-5-88----- | | | -----1-13-88----- | | | -----1-18-88----- | | | -----1-27-88----- | | |
|----------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|
| | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) |
| G-1 | 0 | | 30.28 | 0 | | 30.12 | >100000 | | 29.95 | 0 | 0 | 30.40 |
| G-2 | >100000 | | | >100000 | | | >100000 | | | 0 | 0 | |
| G-3 | 0 | | | 0 | | | 0 | | | 0 | 0 | |
| G-4 | 0 | | | 5 | | | 0 | | | 0 | 0 | |
| G-5 | 0 | | | 5 | | | 0 | | | 0 | 0 | |
| G-6 | 0 | | | 50 | | | 0 | | | 0 | 0 | |
| G-7 | >100000 | | | >100000 | | | >100000 | | | 15 | 5 | |
| G-8 | >100000 | | | 200 | | | >100000 | | | 15 | 7 | |
| G-9 | >100000 | | | >100000 | | | >100000 | | | >100000 | >100000 | |
| G-10 | 0 | | | 0 | | | 0 | | | 0 | 0 | |
| G-11 | 0 | | | 0 | | | 0 | | | 0 | 0 | |
| G-12 | 0 | | | 0 | | | 0 | | | 45 | 0 | |
| G-13 | 0 | | | 5 | | | 0 | | | 20 | 3 | |
| G-14 | 0 | | | 15 | | | 0 | | | 0 | 3 | |
| G-15 | >100000 | | | 60 | | | >100000 | | | 5 | 0 | |
| G-16 | * | | | * | | | * | | | * | * | |
| G-17 | 1000 | | | 15000 | | | >100000 | | | 0 | 30 | |
| G-18 | 1000 | | | 400 | | | 50 | | | 0 | 30 | |
| G-19 | * | | | * | | | * | | | * | * | |

All results reported in parts per million (ppm).

Measurements conducted in the field with a Century Systems Model 118 (upper detection limit 1,000 ppm) or 88 (upper detection limit 100,000 ppm) Organic Vapor Analyzer (OVA). Instruments were calibrated using a methane standard.

(a) Measurements made using standard OVA probe.

(b) Measurements made using activated charcoal filter probe to absorb non-methane volatile organic compounds.

(c) Inches of mercury. Readings obtained from local weather service (Compu Weather, Inc., Flushing, New York, or Newsday) before sampling, or from New York Flight Service, Islip, New York at 5 pm on the day of sampling, or from Long Island Weather observers, Mineola, New York at 6 pm on the day of sampling.

* Gas well destroyed.

Table 21. Summary of Gas Well Monitoring Data at Syosset Landfill, Syosset, New York.

| Well Number | -----2-18-88----- | | | -----2-24-88----- | | | -----3-1-88----- | | | -----3-10-88----- | | |
|----------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|
| | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) |
| G-1 | 0 | 0 | 30.22 | 0 | 0 | 30.01 | 0 | 0 | 30.20 | 180 | 180 | 29.67 |
| G-2 | >100000 | >100000 | | >100000 | >100000 | | >100000 | <100000 | | <100000 | <100000 | |
| G-3 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-4 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-5 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-6 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-7 | 8,000 | 8000 | | 4000 | 2000 | | 16000 | 1800 | | <100000 | <100000 | |
| G-8 | 0 | 0 | | 4 | 4 | | 700 | 700 | | <100000 | <100000 | |
| G-9 | * | * | | * | * | | * | * | | * | * | |
| G-10 | 0 | 0 | | 0 | 0 | | 0 | 0 | | <100000 | <100000 | |
| G-11 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-12 | * | * | | * | * | | * | * | | * | * | |
| G-13 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 100 | 50 | |
| G-14 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-15 | 10000 | 10000 | | 150 | 70 | | 0 | 0 | | 15 | 10 | |
| G-16 | * | * | | * | * | | * | * | | * | * | |
| G-17 | >100000 | >100000 | | 500 | 400 | | 35000 | 25000 | | >100000 | <100000 | |
| G-18 | 0 | 0 | | 100000 | 1800 | | >100000 | >100000 | | >100000 | <100000 | |
| G-19 | * | * | | * | * | | * | * | | * | * | |

All results reported in parts per million (ppm).

Measurements conducted in the field with a Century Systems Model 118 (upper detection limit 1,000 ppm) or 88 (upper detection limit 100,000 ppm) Organic Vapor Analyzer (OVA). Instruments were calibrated using a methane standard.

(a) Measurements made using standard OVA probe.

(b) Measurements made using activated charcoal filter probe to absorb non-methane volatile organic compounds.

(c) Inches of mercury. Readings obtained from local weather service (Compu Weather, Inc., Flushing, New York, or Newsday) before sampling, or from New York Flight Service, Islip, New York at 5 pm on the day of sampling, or from Long Island Weather observers, Mineola, New York at 6 pm on the day of sampling.

* Gas well destroyed.

Table 21. Summary of Gas Well Monitoring Data at Syosset Landfill, Syosset, New York.

| Well Number | -----4-14-88----- | | | -----4-22-88----- | | | -----5-16-88----- | | | -----6-15-88----- | | |
|----------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|
| | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) |
| G-1 | 0 | | 30.05 | 0 | 0 | 29.72 | 7 | 7 | 30.00 | 0 | 0 | 30.08 |
| G-2 | >1000 | | | >100000 | >100000 | | >100000 | >100000 | | >100000 | >100000 | |
| G-3 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-4 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-5 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-6 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-7 | >1000 | | | 1200 | 1200 | | >100000 | >100000 | | >100000 | >100000 | |
| G-8 | >1000 | | | 1500 | 300 | | 0 | 0 | | 0 | 0 | |
| G-9 | * | | | * | * | | * | * | | * | * | |
| G-10 | 0 | | | 0 | 0 | | 200 | 0 | | 0 | 0 | |
| G-11 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-12 | * | | | * | * | | * | * | | * | * | |
| G-13 | 5 | | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-14 | 0 | | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-15 | 0 | | | 8 | 100 | | 0 | 0 | | 0 | 0 | |
| G-16 | * | | | * | * | | * | * | | * | * | |
| G-17 | 0 | | | 450 | 450 | | >100000 | >100000 | | >100000 | >100000 | |
| G-18 | 0 | | | 1200 | 1200 | | >100000 | >100000 | | >100000 | >100000 | |
| G-19 | * | | | * | * | | * | * | | * | * | |

All results reported in parts per million (ppm).

Measurements conducted in the field with a Century Systems Model 118 (upper detection limit 1,000 ppm) or 88 (upper detection limit 100,000 ppm) Organic Vapor Analyzer (OVA). Instruments were calibrated using a methane standard.

(a) Measurements made using standard OVA probe.

(b) Measurements made using activated charcoal filter probe to absorb non-methane volatile organic compounds.

(c) Inches of mercury. Readings obtained from local weather service (Compu Weather, Inc., Flushing, New York, or Newsday) before sampling, or from New York Flight Service, Islip, New York at 5 pm on the day of sampling, or from Long Island Weather observers, Mineola, New York at 6 pm on the day of sampling.

* Gas well destroyed.

Table 21. Summary of Gas Well Monitoring Data at Syosset Landfill, Syosset, New York.

| Well Number | -----7-20-88----- | | | -----8-18-88----- | | | -----9-23-88----- | | | -----11-4-88****----- | | |
|----------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|----------------------------------|-------------|----------------------------|
| | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) | Total Non-Methane VOCs (a) | Methane (b) | Barometric Pressure (c) |
| G-1 | 0 | 0 | 30.07 | * | * | 29.84 | * | * | 29.70 | * | * | 29.94 |
| G-2 | 5000 | 300 | | 0 | 0 | | >1000 | >1000 | | >2000 | >2000 | |
| G-3 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-4 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-5 | * | * | | * | * | | * | * | | * | * | |
| G-6 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 9 | 6 | |
| G-7 | 2000 | 1500 | | 20 | 10 | | >1000 | >1000 | | >2000 | >2000 | |
| G-8 | 0 | 0 | | 0 | 0 | | >1000 | >1000 | | >2000 | >2000 | |
| G-9 | * | * | | * | * | | * | * | | * | * | |
| G-10 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-11 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| G-12 | * | * | | * | * | | * | * | | * | * | |
| G-13 | 0 | 0 | | 0 | 0 | | 5.0 | 2.0 | | 0 | 0 | |
| G-14 | 0 | 0 | | 0 | 0 | | 60 | 28 | | 0 | 0 | |
| G-15 | 25 | 35 | | 0 | - | | 52 | 52 | | 3 | 3 | |
| G-16 | * | * | | * | * | | * | * | | * | * | |
| G-17 | 0 | 0 | | 0 | 0 | | 0 | 0 | | >2000 | >2000 | |
| G-18 | *** | *** | | *** | *** | | >1000 | >1000 | | >2000 | >2000 | |
| G-19 | * | * | | * | * | | * | * | | * | * | |

All results reported in parts per million (ppm).

Measurements conducted in the field with a Century Systems Model 118 (upper detection limit 1,000 ppm) or 88 (upper detection limit 100,000 ppm) Organic Vapor Analyzer (OVA). Instruments were calibrated using a methane standard.

(a) Measurements made using standard OVA probe.

(b) Measurements made using activated charcoal filter probe to absorb non-methane volatile organic compounds.

(c) Inches of mercury. Readings obtained from local weather service (Compu Weather, Inc., Flushing, New York, or Newsday) before sampling, or from New York Flight Service, Islip, New York at 5 pm on the day of sampling, or from Long Island Weather observers, Mineola, New York at 6 pm on the day of sampling.

* Gas well destroyed.

*** Could not locate monitor gas well.

**** On 11/4/88 the OVA meter would not give accurate readings above 2000 ppm.

Table 22. Concentrations of Volatile Organic Compounds in Gas Samples Collected from Selected Gas Monitoring Wells during the Subsurface Gas Study, Syosset Landfill, Syosset, New York.

| Sample Designation: | G-2 | G-2 | G-3 | G-3 | G-4 | G-4 |
|---------------------------|--------|---------|------|--------|------|--------|
| Date Sampled: | 7/7/87 | 8/26/88 | 7/87 | 9/1/88 | 7/87 | 9/1/88 |
| *** Barometric Pressure: | 30.02 | 29.88 | | 30.34 | | 30.34 |
| Parameter | | | | | | |
| Chloromethane | <2 | <1 | * | <1 | * | <1 |
| Bromomethane | <2 | <1 | * | <1 | * | <1 |
| Dichlorodifluomethane | <100 | <1 | * | <1 | * | <1 |
| Vinyl chloride | >400 | <1 | * | <1 | * | <1 |
| Chloroethane | >400 | <2 | * | <2 | * | <2 |
| Methylene chloride | 180 | 6 | * | 20 | * | 32 |
| Trichlorofluomethane | + | <3 | * | 29 | * | 18 |
| 1,1-Dichloroethene | 6 | <3 | * | <3 | * | <3 |
| 1,1-Dichloroethane | 55 | <3 | * | <3 | * | <3 |
| 1,2-Dichloroethene | 18 | <3 | * | <3 | * | <3 |
| Chloroform | 9 | 3 | * | 7 | * | <2 |
| 1,2-Dichloroethane | <4 | <3 | * | <3 | * | <3 |
| 1,1,1-Trichloroethane | 2 | <2 | * | <2 | * | <2 |
| Carbon tetrachloride | <2 | <2 | * | <2 | * | <2 |
| Bromodichloromethane | <2 | <2 | * | <2 | * | 2 |
| 1,2-Dichloropropane | <4 | <3 | * | <3 | * | <3 |
| trans-1,3-Dichloropropene | <4 | <3 | * | <3 | * | <3 |
| Trichloroethylene | 7 | 4 | * | <2 | * | <2 |
| Chlorodibromomethane | <2 | <2 | * | <2 | * | <2 |
| 1,1,2-Trichloroethane | <4 | <2 | * | <2 | * | <2 |
| cis-1,3-Dichloropropene | <4 | <3 | * | <3 | * | <3 |
| 2-Chloroethyl vinyl ether | <4 | <3 | * | <3 | * | <3 |
| Bromoform | <4 | <2 | * | <2 | * | <2 |
| 1,1,2,2-Tetrachloroethane | <4 | <2 | * | <2 | * | <2 |
| Tetrachloroethene | 6 | 11 | * | 4 | * | 6 |
| Chlorobenzene | <2 | <2 | * | <2 | * | <2 |
| 1,3-Dichlorobenzene | <4 | <2 | * | <2 | * | <2 |
| 1,2-Dichlorobenzene | <4 | <2 | * | <2 | * | <2 |
| 1,4-Dichlorobenzene | <4 | <2 | * | <2 | * | <2 |
| Benzene | 59 | 180 | * | <2 | * | <2 |
| Toluene | 110 | 190 | * | 32 | * | 56 |
| Ethyl benzene | 52 | <2 | * | <2 | * | <2 |
| m Xylene | 23 | 38 | * | 3 | * | 8 |
| o + p Xylene | 8 | <5 | * | 6 | * | 6 |
| Total VOCs | >1335 | 432 | * | 101 | * | 128 |

All results reported in parts per billion (ppb).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

* Not analyzed; gas well was not sampled during the first sampling round (July 1987).

Samples were collected from wells during the second round (April 1988) to replace wells destroyed since the first sampling round.

** Wells destroyed between first and second sampling rounds.

+ Sample contained a small amount of trichlorofluoromethane. No standard was run so this compound could not be quantified.

*** Barometric pressures were obtained from the Long Island Weather Observers, Mineola, New York; measured in inches of mercury at about 6 pm each day.

Table 22. Concentrations of Volatile Organic Compounds in Gas Samples Collected from Selected Gas Monitoring Wells during the Subsurface Gas Study, Syosset Landfill, Syosset, New York.

| | | | | | | |
|---------------------------|--------|---------|--------|--------|--------|------|
| Sample Designation: | G-7 | G-7 | G-8 | G-8 | G-12 | G-12 |
| Date Sampled: | 7/8/87 | 8/26/88 | 7/8/87 | 9/1/88 | 7/8/87 | 8/88 |
| *** Barometric Pressure: | 29.88 | 29.88 | 29.88 | 30.34 | 29.88 | |
| Parameter | | | | | | |
| Chloromethane | <2 | <1 | <2 | <1 | <2 | ** |
| Bromomethane | <2 | <1 | <2 | <1 | <2 | ** |
| Dichlorodifluomethane | <100 | <1 | <2 | <1 | <2 | ** |
| Vinyl chloride | >400 | <1 | <2 | <1 | <2 | ** |
| Chloroethane | <2 | <2 | <2 | <2 | <2 | ** |
| Methylene chloride | 110 | 6 | <4 | 18 | <4 | ** |
| Trichlorofluomethane | <4 | <3 | <4 | 18 | <4 | ** |
| 1,1-Dichloroethene | <4 | <3 | <4 | <3 | <4 | ** |
| 1,1-Dichloroethane | <4 | <3 | <4 | <3 | <4 | ** |
| 1,2-Dichloroethene | <4 | <3 | <4 | <3 | <4 | ** |
| Chloroform | 11 | <2 | <2 | 6 | 5 | ** |
| 1,2-Dichloroethane | <4 | 3 | <4 | <3 | <4 | ** |
| 1,1,1-Trichloroethane | <2 | <2 | <2 | <2 | <2 | ** |
| Carbon tetrachloride | <2 | <2 | <2 | <2 | <2 | ** |
| Bromodichloromethane | <2 | <2 | <2 | <2 | <2 | ** |
| 1,2-Dichloropropane | <4 | <3 | <4 | <3 | <4 | ** |
| trans-1,3-Dichloropropene | <4 | <3 | <4 | <3 | <4 | ** |
| Trichloroethylene | <2 | 2 | <2 | <2 | <2 | ** |
| Chlorodibromomethane | <2 | <2 | <2 | <2 | <2 | ** |
| 1,1,2-Trichloroethane | <4 | <2 | <4 | <2 | <4 | ** |
| cis-1,3-Dichloropropene | <4 | <3 | <4 | <3 | <4 | ** |
| 2-Chloroethyl vinyl ether | <4 | <3 | <4 | <3 | <4 | ** |
| Bromoform | <4 | <2 | <4 | <2 | <4 | ** |
| 1,1,2,2-Tetrachloroethane | <4 | <2 | <4 | <2 | <4 | ** |
| Tetrachloroethene | 5 | 10 | 2 | 3 | 3 | ** |
| Chlorobenzene | <2 | <2 | <2 | <2 | <2 | ** |
| 1,3-Dichlorobenzene | <4 | <2 | <4 | <2 | <4 | ** |
| 1,2-Dichlorobenzene | <4 | <2 | <4 | <2 | <4 | ** |
| 1,4-Dichlorobenzene | <4 | <2 | <4 | <2 | <4 | ** |
| Benzene | 86 | <2 | <2 | <2 | <2 | ** |
| Toluene | 78 | 48 | 23 | 27 | 30 | ** |
| Ethyl benzene | 5 | 250 | <2 | <2 | <2 | ** |
| m Xylene | 230 | 24 | 20 | <3 | 12 | ** |
| o + p Xylene | <8 | <5 | <8 | <5 | <8 | ** |
| Total VOCs | >925 | 343 | 45 | 72 | 50 | ** |

All results reported in parts per billion (ppb).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

* Not analyzed; gas well was not sampled during the first sampling round (July 1987).

Samples were collected from wells during the second round (April 1988) to replace wells destroyed since the first sampling round.

** Wells destroyed between first and second sampling rounds.

*** Barometric pressures were obtained from the Long Island Weather Observers, Mineola, New York; measured in inches of mercury at about 6 pm each day.

Table 22. Concentrations of Volatile Organic Compounds in Gas Samples Collected from Selected Gas Monitoring Wells during the Subsurface Gas Study, Syosset Landfill, Syosset, New York.

| | | | | | | |
|---------------------------|--------|---------|------|---------|--------|---------|
| Sample Designation: | G-13 | G-13 | G-14 | G-14 | G-15 | G-15 |
| Date Sampled: | 7/8/87 | 8/26/88 | 7/87 | 8/26/88 | 7/9/87 | 8/26/88 |
| *** Barometric Pressure: | 30.13 | 29.88 | | 29.88 | 29.87 | 29.88 |
| Parameter | | | | | | |
| Chloromethane | <2 | <1 | * | <1 | <2 | <1 |
| Bromomethane | <2 | <1 | * | <1 | <2 | <1 |
| Dichlorodifluomethane | <2 | <1 | * | <1 | <2 | <1 |
| Vinyl chloride | <2 | <1 | * | <1 | 30 | <1 |
| Chloroethane | <2 | <2 | * | <2 | <2 | <2 |
| Methylene chloride | <4 | <3 | * | 9 | 14 | 12 |
| Trichlorofluomethane | <4 | <3 | * | <3 | <4 | <3 |
| 1,1-Dichloroethene | <4 | <3 | * | <3 | <4 | <3 |
| 1,1-Dichloroethane | <4 | <3 | * | <3 | <4 | <3 |
| 1,2-Dichloroethene | <4 | <3 | * | <3 | <4 | <3 |
| Chloroform | 8 | <2 | * | 12 | <2 | 10 |
| 1,2-Dichloroethane | <4 | <3 | * | <3 | <4 | <3 |
| 1,1,1-Trichloroethane | <2 | <2 | * | 4 | <2 | <2 |
| Carbon tetrachloride | <2 | <2 | * | <2 | <2 | <2 |
| Bromodichloromethane | <2 | <2 | * | <2 | <2 | <2 |
| 1,2-Dichloropropane | <4 | <3 | * | <3 | <4 | <3 |
| trans-1,3-Dichloropropene | <4 | <3 | * | <3 | <4 | <3 |
| Trichloroethylene | <2 | <2 | * | <2 | <2 | <2 |
| Chlorodibromomethane | <2 | <2 | * | <2 | <2 | <2 |
| 1,1,2-Trichloroethane | <4 | <2 | * | <2 | <4 | <2 |
| cis-1,3-Dichloropropene | <4 | <3 | * | <3 | <4 | <3 |
| 2-Chloroethyl vinyl ether | <4 | <3 | * | <3 | <4 | <3 |
| Bromoform | <4 | <2 | * | <2 | <4 | <2 |
| 1,1,2,2-Tetrachloroethane | <4 | <2 | * | <2 | <4 | <2 |
| Tetrachloroethene | 5 | 6 | * | 10 | 3 | 8 |
| Chlorobenzene | <2 | <2 | * | <2 | <2 | <2 |
| 1,3-Dichlorobenzene | <4 | <2 | * | <2 | <4 | <2 |
| 1,2-Dichlorobenzene | <4 | <2 | * | <2 | <4 | <2 |
| 1,4-Dichlorobenzene | <4 | <2 | * | <2 | <4 | <2 |
| Benzene | <2 | <2 | * | <2 | 30 | <2 |
| Toluene | 28 | 58 | * | 37 | 240 | 37 |
| Ethyl benzene | <2 | 2 | * | 6 | 44 | <2 |
| m Xylene | 17 | 13 | * | 17 | 130 | 9 |
| o + p Xylene | <8 | 10 | * | 11 | 108 | <5 |
| Total VOCs | 58 | 89 | * | 106 | 599 | 76 |

All results reported in parts per billion (ppb).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

* Not analyzed; gas well was not sampled during the first sampling round (July 1987).

Samples were collected from wells during the second round (April 1988) to replace wells destroyed since the first sampling round.

** Wells destroyed between first and second sampling rounds.

*** Barometric pressures were obtained from the Long Island Weather Observers, Mineola, New York; measured in inches of mercury at about 6 pm each day.

Table 22. Concentrations of Volatile Organic Compounds in Gas Samples Collected from Selected Gas Monitoring Wells during the Subsurface Gas Study, Syosset Landfill, Syosset, New York.

| | | | | | | |
|---------------------------|--------|------|--------|---------|--------|---------|
| Sample Designation: | G-16 | G-16 | G-17 | G-17 | G-18 | G-18 |
| Date Sampled: | 7/8/87 | 8/88 | 7/9/87 | 8/26/88 | 7/8/87 | 8/26/88 |
| *** Barometric Pressure: | 30.13 | | 29.87 | 29.88 | 30.13 | 29.88 |
| Parameter | | | | | | |
| Chloromethane | <2 | ** | <2 | <1 | <2 | <1 |
| Bromomethane | <2 | ** | <2 | <1 | <2 | <1 |
| Dichlorodifluomethane | <100 | ** | <100 | <1 | <2 | <1 |
| Vinyl chloride | 190 | ** | >400 | <1 | <2 | <1 |
| Chloroethane | <2 | ** | <2 | <2 | <2 | <2 |
| Methylene chloride | 6 | ** | 34 | 5 | 9 | <3 |
| Trichlorofluomethane | <4 | ** | <4 | <3 | <4 | <3 |
| 1,1-Dichloroethene | 8 | ** | <4 | <3 | <4 | <3 |
| 1,1-Dichloroethane | <4 | ** | <4 | <3 | <4 | <3 |
| 1,2-Dichloroethene | <4 | ** | <4 | <3 | <4 | <3 |
| Chloroform | 11 | ** | 5 | 2 | 8 | 5 |
| 1,2-Dichloroethane | <4 | ** | <4 | <3 | <4 | <3 |
| 1,1,1-Trichloroethane | <2 | ** | <2 | 2 | 2 | 2 |
| Carbon tetrachloride | <2 | ** | <2 | <2 | <2 | <2 |
| Bromodichloromethane | <2 | ** | <2 | <2 | <2 | <2 |
| 1,2-Dichloropropane | <4 | ** | <4 | <3 | <4 | <3 |
| trans-1,3-Dichloropropene | <4 | ** | <4 | <3 | <4 | <3 |
| Trichloroethylene | 3 | ** | <2 | <2 | <2 | <2 |
| Chlorodibromomethane | <2 | ** | <2 | <2 | <2 | <2 |
| 1,1,2-Trichloroethane | <4 | ** | <4 | <2 | <4 | <2 |
| cis-1,3-Dichloropropene | <4 | ** | <4 | <3 | <4 | <3 |
| 2-Chloroethyl vinyl ether | <4 | ** | <4 | <3 | <4 | <3 |
| Bromoform | <4 | ** | <4 | <2 | <4 | <2 |
| 1,1,2,2-Tetrachloroethane | <4 | ** | <4 | <2 | <4 | <2 |
| Tetrachloroethene | 6 | ** | 5 | 5 | 8 | 9 |
| Chlorobenzene | <2 | ** | <2 | <2 | <2 | <2 |
| 1,3-Dichlorobenzene | <4 | ** | <4 | <2 | <4 | <2 |
| 1,2-Dichlorobenzene | <4 | ** | <4 | <2 | <4 | <2 |
| 1,4-Dichlorobenzene | <4 | ** | <4 | <2 | <4 | <2 |
| Benzene | <2 | ** | 19 | <2 | 9 | <2 |
| Toluene | 39 | ** | 120 | 22 | 58 | 29 |
| Ethyl benzene | 12 | ** | 20 | 4 | 11 | <2 |
| m Xylene | 35 | ** | 55 | <3 | 26 | 6 |
| o + p Xylene | 15 | ** | 43 | <5 | 18 | 8 |
| Total VOCs | 325 | ** | >701 | 40 | 149 | 59 |

All results reported in parts per billion (ppb).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

* Not analyzed; gas well was not sampled during the first sampling round (July 1987).

Samples were collected from wells during the second round (April 1988) to replace wells destroyed since the first sampling round.

** Wells destroyed between first and second sampling rounds.

*** Barometric pressures were obtained from the Long Island Weather Observers, Mineola, New York; measured in inches of mercury at about 6 pm each day.

Table 22. Concentrations of Volatile Organic Compounds in Gas Samples Collected from Selected Gas Monitoring Wells during the Subsurface Gas Study, Syosset Landfill, Syosset, New York.

| Parameter | Sample Designation: | | Trip | |
|---------------------------|---------------------|------|--------|--------|
| | Date Sampled: | | Blank | |
| | G-19 | G-19 | Blank | Blank |
| | 7/8/87 | 8/88 | 7/8/87 | 7/9/87 |
| *** Barometric Pressure: | 30.13 | | 30.13 | 29.87 |
| Chloromethane | <2 | ** | <2 | <2 |
| Bromomethane | <2 | ** | <2 | <2 |
| Dichlorodifluomethane | <10 | ** | <2 | <2 |
| Vinyl chloride | 53 | ** | <2 | <2 |
| Chloroethane | 2 | ** | <2 | <2 |
| Methylene chloride | 34 | ** | <4 | <4 |
| Trichlorofluomethane | <4 | ** | <4 | <4 |
| 1,1-Dichloroethene | <4 | ** | <4 | <4 |
| 1,1-Dichloroethane | <4 | ** | <4 | <4 |
| 1,2-Dichloroethene | <4 | ** | <4 | <4 |
| Chloroform | 9 | ** | <2 | <2 |
| 1,2-Dichloroethane | <4 | ** | <4 | <4 |
| 1,1,1-Trichloroethane | <2 | ** | <2 | <2 |
| Carbon tetrachloride | <2 | ** | <2 | <2 |
| Bromodichloromethane | <2 | ** | <2 | <2 |
| 1,2-Dichloropropane | <4 | ** | <4 | <4 |
| trans-1,3-Dichloropropene | <4 | ** | <4 | <4 |
| Trichloroethylene | <2 | ** | <2 | <2 |
| Chlorodibromomethane | <2 | ** | <2 | <2 |
| 1,1,2-Trichloroethane | <4 | ** | <4 | <4 |
| cis-1,3-Dichloropropene | <4 | ** | <4 | <4 |
| 2-Chloroethyl vinyl ether | <4 | ** | <4 | <4 |
| Bromoform | <4 | ** | <4 | <4 |
| 1,1,2,2-Tetrachloroethane | <4 | ** | <4 | <4 |
| Tetrachloroethene | 12 | ** | 5 | <2 |
| Chlorobenzene | <2 | ** | <2 | <2 |
| 1,3-Dichlorobenzene | <4 | ** | <4 | <4 |
| 1,2-Dichlorobenzene | <4 | ** | <4 | <4 |
| 1,4-Dichlorobenzene | <4 | ** | <4 | <4 |
| Benzene | 35 | ** | 12 | <2 |
| Toluene | 210 | ** | 70 | 4 |
| Ethyl benzene | 25 | ** | 4 | <2 |
| m Xylene | 70 | ** | 30 | <4 |
| o + p Xylene | 49 | ** | 18 | <8 |
| Total VOCs | 499 | ** | 139 | 4 |

All results reported in parts per billion (ppb).

Samples analyzed using USEPA Methods 601, 602 by EcoTest Laboratories, Inc., North Babylon, New York.

* Not analyzed; gas well was not sampled during the first sampling round (July 1987).

Samples were collected from wells during the second round (April 1988) to replace wells destroyed since the first sampling round.

** Wells destroyed between first and second sampling rounds.

*** Barometric pressures were obtained from the Long Island Weather Observers, Mineola, New York; measured in inches of mercury at about 6 pm each day.

Table 23. Summary of Physical and Chemical Properties of Hazardous Organic Chemicals Detected in the Landfill Materials and Ground Water During the Interim RI, Syosset Landfill, Syosset, New York.

| Parameter | Aqueous Solubility mg/L (Temp C°) | Specific Gravity g/ml | Log Henry's Law | Log Kow | Breakdown Products |
|-----------------------------------|--------------------------------------|--------------------------|--------------------|---------|---|
| <u>Volatile Organic Compounds</u> | | | | | |
| Acetone | 1,000,000 (25) | 0.7899 | NA | NA | |
| Carbon disulfide | 2,200 (25) | 1.2632 | NA | NA | |
| Chloromethane | 6,450 - 7,250 (20) | 1.3255 | -1.43 | 0.91 | |
| Bromomethane | 18,040 (25) | 1.7300 | -2.28 | 1.09 | |
| Vinyl Chloride | 1.1 (25) | 0.9106 | -1.44 | 0.60 | |
| Chloroethane | 5,740 (20) | 0.9214 | -1.84 | 1.54 | Ethanol |
| Methylene chloride | 16,700 (25) | 1.3255 | -2.5 | 1.25 | |
| Trichlorofluoromethane | 1,100 | 1.484 | -1.23 | 2.53 | |
| 1,1-Dichloroethane | 5,500 | 1.1680 | -2.26 | 1.79 | |
| Chloroform | 8,000 (20) | 1.4840 | -2.47 | 1.97 | Dichloromethane |
| 1,2-Dichloroethane | 8,300 (20) | 1.2569 | -2.96 | 1.48 | |
| 1,1,1-Trichloroethane | 950 (20) | 1.3376 | -2.31 | 2.17 | Acetic Acid; Hydrochloric Acid |
| Carbon Tetrachloride | 800 (20) | 1.597 | -1.52 | 2.64 | Dichloromethane |
| Bromodichloromethane | 4,500 | 1.98 | NA | 2.10 | |
| Benzene | 1,780 (25) | 0.8787 | -2.26 | 2.31 | Catechols |
| 1,2-Dichloropropane | 2,700 (20) | 1.1590 | -2.55 | 2.28 | 1,2-Propanediol |
| trans-1,3-Dichloropropane | 2,750 | 1.2170 | NA | 2.00 | |
| Trichloroethylene | 1,100 (20) | 1.4649 | -1.93 | 2.29 | 1,2-Dichloroethene |
| Chlorodibromomethane | NA | 2.440 | -3.11 | 2.09 | |
| 1,1,2-Trichloroethane | 4,500 (20) | 1.4416 | -3.07 | 2.17 | |
| cis-1,3-Dichloropropane | 2,750 (-) | 1.2240 | NA | 2.00 | |
| Bromoform | 3,010 (15) | 2.9035 | -3.27 | 2.30 | Dibromomethane |
| 1,1,2,2-Tetrachloroethane | 2,900 (20) | 1.5866 | -3.36 | 2.56 | |
| Tetrachloroethene | 150 (20) | 1.6230 | -1.54 | 2.88 | Trichloroacetic Acid; Hydrochloric Acid 1,2-Dichloroethene; Chloroethene |

Table 23. Summary of Physical and Chemical Properties of Hazardous Organic Chemicals Detected in the Landfill Materials and Ground Water During the Interim RI, Syosset Landfill, Syosset, New York.

| Parameter | Aqueous Solubility mg/L (Temp C ^o) | Specific Gravity g/ml | Log Henry's Law | Log Kow | Breakdown Products |
|---|---|--------------------------|--------------------|---------|--|
| <u>Volatile Organic Compounds (Continued)</u> | | | | | |
| Chlorobenzene | 472 (25) | 1.1070 | -2.41 | 2.84 | Phenol |
| 1,3-Dichlorobenzene | 123 | 1.2828 | -2.58 | 3.38 | |
| 1,2-Dichlorobenzene | 145 | 1.307 | -2.71 | 3.38 | |
| 1,4-Dichlorobenzene | 79 | 1.4581 | -2.57 | 3.39 | |
| Toluene | 535 (25) | 0.8660 | -2.23 | 2.69 | Cresols and Catechols |
| 2-Butanone | 275,000 | 0.8050 | NA | NA | |
| Dibromochloromethane | 4,000 | 2.38 | NA | 2.24 | |
| 4-Methyl-2-pentanone | 19,000 (25) | 0.8010 | NA | NA | |
| Styrene | 174 (31) | 0.9059 | -2.29 | NA | |
| Ethylbenzene | 206 (25) | 0.8660 | -2.19 | 3.15 | |
| M xylene | 162 (25) | 0.8684 | -2.16 | 3.20 | |
| O xylene | 186 (25) | 0.8801 | -2.31 | 2.77 | |
| P xylene | 179 (25) | 0.8610 | -2.15 | 3.15 | |
| <u>Base/Neutral Compounds</u> | | | | | |
| Benzoic Acid | 2,100 (25) | 1.316 | NA | NA | 1-Naphthol |
| Naphthalene | 34.4 (25) | 0.9625/1.0253 | -3.44 | 3.37 | |
| 2-Methylnaphthalene | NA | 1.0058 | NA | NA | |
| Dimethylphthalate | 4,300 (32) | 1.189 | -6.49 | 2.12 | 1,2-Dihydroxybenzene |
| Acenaphthylene | 3.93 (25) | 0.8988 | -3.94 | 4.07 | 1,2-Dihydroxybenzene |
| Acenaphthene | 3.42 (25) | 1.0242 | -3.63 | 4.33 | |
| Diethylphthalate | 1,000 (32) | NA | -6.07 | 3.22 | |
| Fluorene | 1.98 (25) | 1.203 | -3.93 | NA | |
| N-Nitrosodiphenylamine | NA | 1.23 | NA | 2.57 | |
| Phenanthrene | 1.29 (25) | 1.179 | -3.97 | 4.46 | 1,2-Dihydroxynaphthalene; dihydroxyphenanthracene |

Table 23. Summary of Physical and Chemical Properties of Hazardous Organic Chemicals Detected in the Landfill Materials and Ground Water During the Interim RI, Syosset Landfill, Syosset, New York.

| Parameter | Aqueous Solubility mg/L (Temp C°) | Specific Gravity g/ml | Log Henry's Law | Log Kow | Breakdown Products |
|---|--------------------------------------|--------------------------|--------------------|---------|-----------------------|
| <u>Base/Neutral Compounds (Continued)</u> | | | | | |
| Anthracene | 0.073 (25) | 1.24 | -4.64 | 4.45 | |
| Di-n-butylphthalate | 400 (25) | 1.047-1.049 | NA | NA | |
| Fluoranthene | 0.26 (25) | NA | NA | 5.33 | |
| Pyrene | 0.14 (25) | 1.271 | NA | 5.32 | |
| Butyl benzyl phthalate | 2.9 | NA | NA | 4.78 | 1,2-Dihydroxybenzene |
| Benzo(a)anthracene | 0.014 (25) | NA | NA | 5.61 | |
| Bis(2-ethylhexyl)phthalate | 0.4 (25) | NA | NA | 8.73 | 1,2-Dihydroxybenzene |
| Chrysene | 0.006 (25) | NA | NA | NA | |
| Di-n-octyl phthalate | 3 (25) | NA | NA | 9.2 | |
| Benzo(b)fluoranthene | | NA | | | |
| Benzo(a)pyrene | 0.0038 (25) | NA | -1.9 | 6.04 | 9,10 - Dihydroxy-9,10 |
| Dihydrobenzo(a)pyrene | | | | | |
| Indeno(1,2,3-cd)pyrene | 0.62 (25) | NA | NA | 7.66 | |
| Benzo(g,h,i)perylene | 0.0002 (25) | NA | NA | 7.23 | |
| <u>Acid Extractables</u> | | | | | |
| 4-Methylphenol | NA | NA | NA | NA | |
| cis-1,2-Dichloroethene | 3,500 (25) | 1.28 | -2.12 | NA | |
| trans-1,2-Dichloroethene | 6,300 (25) | 1.28 | -2.18 | 2.09 | |

Table 23. Summary of Physical and Chemical Properties of Hazardous Organic Chemicals Detected in the Landfill Materials and Ground Water During the Interim RI, Syosset Landfill, Syosset, New York.

Notes:

Log Kow - Log of octanol/water partition coefficient.
Log Henry's Law - Log of Henry's Law constant.
NA - Not available.

References used:

Chemical Information Systems, Inc. 1989. Database searches for property information.
Saar, R. A., G. M. Spreizer. 1985. Guidance Manual for the Selection of Chemical Parameters at Hazardous-Waste Facilities, Geraghty & Miller, Inc.
Sax, N. I., 1984. Dangerous Properties of Industrial Material. Van Nostrand Reinhold Company, NY, NY.
U.S.E.P.A., 1979. Water Related Environmental Fate of 129 Priority Pollutants, Versar Inc., Springfield, VA.
Windholz, M., S. Budavari, R. F., R. F. Bluonetti, and E. S. Otterbein, eds., The Merck Index, 1983. 10th Edition, Merck and Company, Inc., Rahway, NJ.

Table 24. Summary of Physical and Chemical Properties of Hazardous Metals Detected in the Landfill Material and Ground Water During the Interim RI, Syosset Landfill, Syosset, New York.

| Parameter | Aqueous Solubility mg/L (Temp C°) | Specific Gravity g/ml | Log Henry's Law | Log Kow | Hydrolysis Constant (unitless) |
|----------------------|--------------------------------------|--------------------------|--------------------|---------|--------------------------------------|
| <u>Metals</u> | | | | | |
| Antimony as Sb | NA | NA | NA | NA | - |
| Arsenic as As | NA | NA | NA | NA | * |
| Barium as Ba | NA | NA | NA | NA | 13.82 |
| Beryllium as Be | NA | NA | NA | NA | 6.50 |
| Cadmium as Cd | NA | NA | NA | NA | 11.70 |
| Chromium (III) as Cr | NA | NA | NA | NA | 4.01 |
| Chromium (VI) as Cr | NA | NA | NA | NA | * |
| Copper as Cu | NA | NA | NA | NA | 7.53 |
| Lead as Pb | NA | NA | NA | NA | 7.78 |
| Selenium as Se | NA | NA | NA | NA | * |
| Silver as Ag | NA | NA | NA | NA | 6.9 |
| Thallium as Tl | NA | NA | NA | NA | 1.15 |
| Zinc as Zn | NA | NA | NA | NA | 9.60 |

Notes:

Log Kow - Log of octanol/water partition coefficient.

Log Henry's Law - Log of Henry's Law constant.

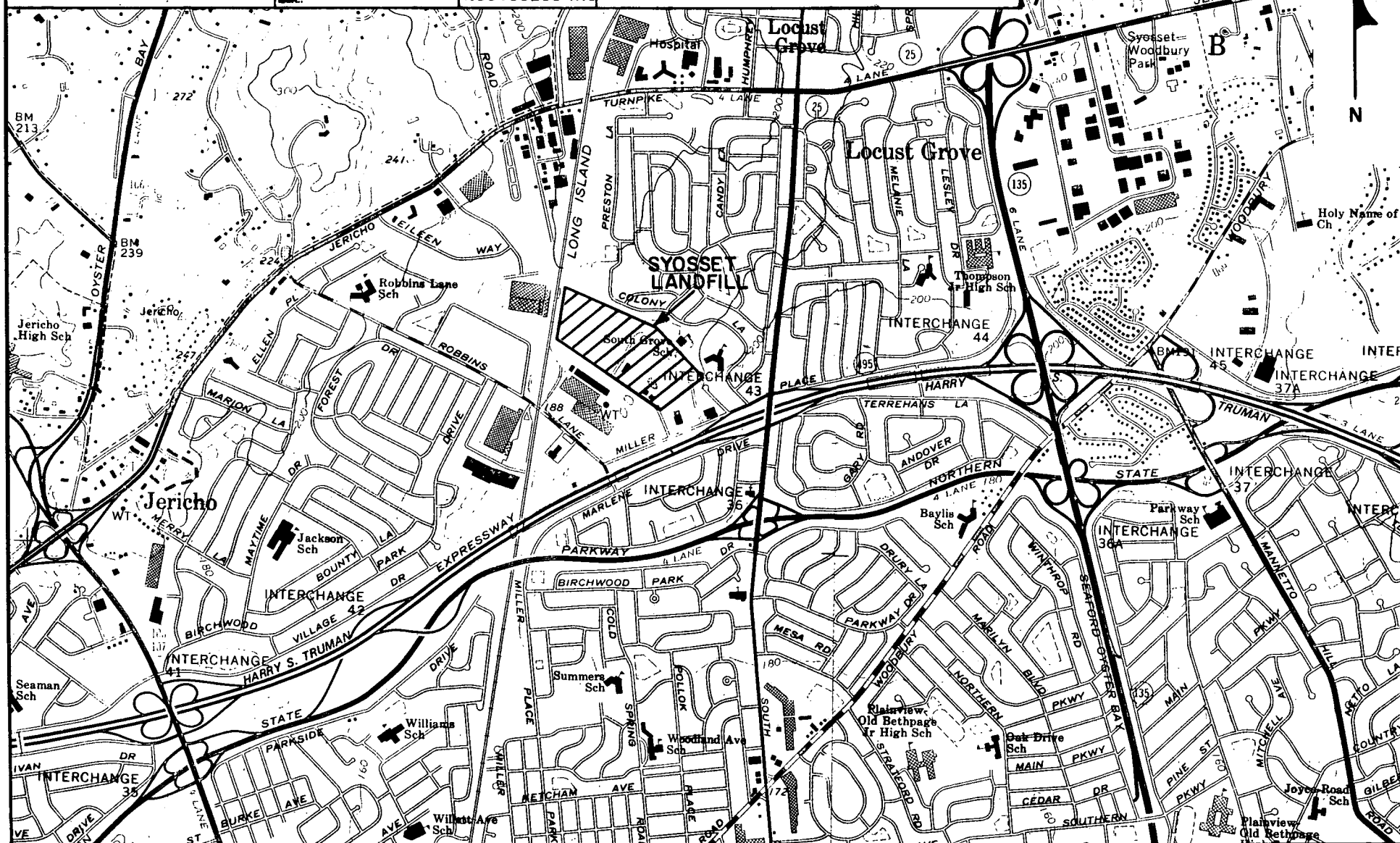
NA - Not available.

* Usually anionic (negatively charged), so does not form hydroxides.

Reference used:

U.S.E.P.A., 1979. Water Related environmental Fate of 129 Priority Pollutants, Versar Inc., Springfield, VA.





SUBJECT:

SITE LOCATION, Syosset Landfill, Syosset, New York

FIGURE

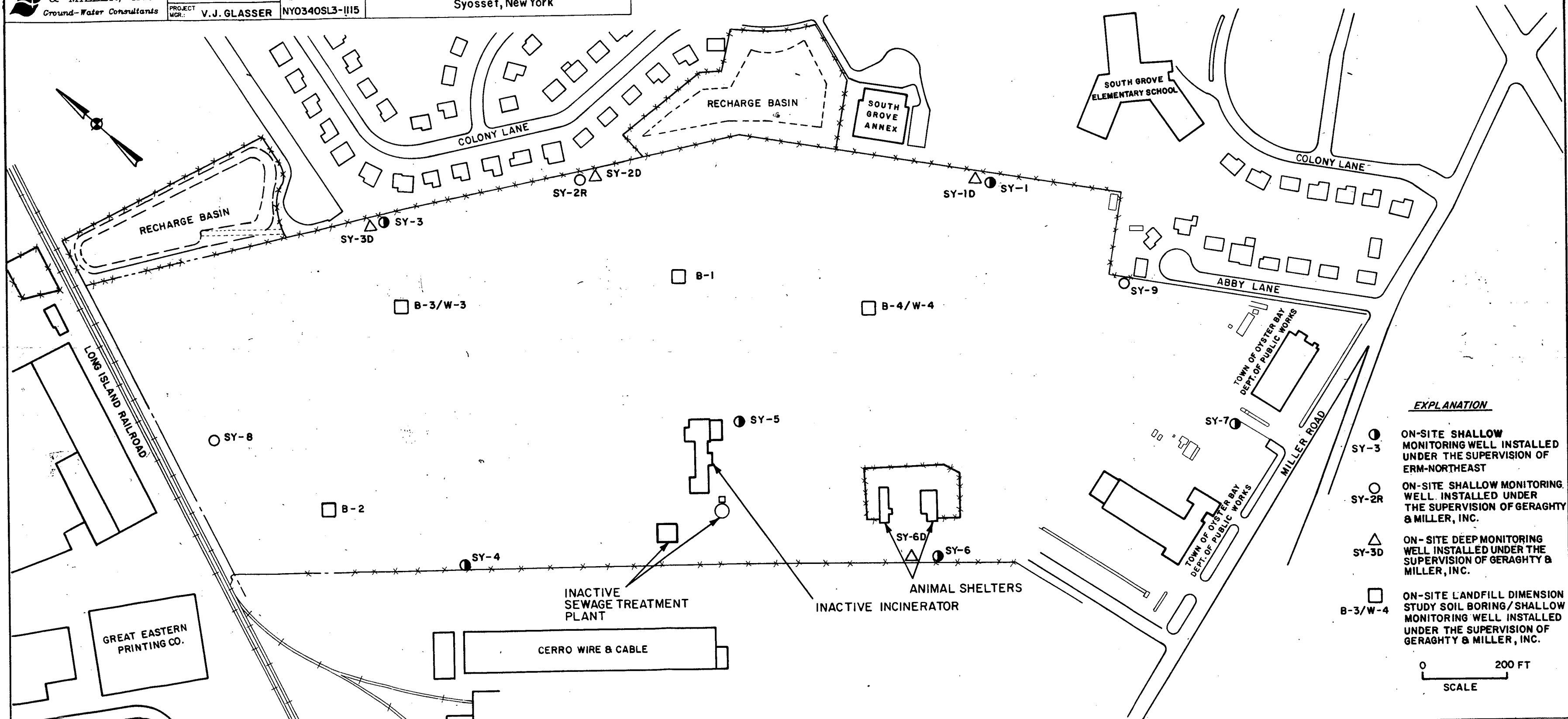
1



0 1/4 1/2 3/4
SCALE MILE

- EXPLANATION**
- N8355 PUBLIC SUPPLY WELL AND THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION WELL DESIGNATION
 - ▲ N7052 INDUSTRIAL WELL AND THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION WELL DESIGNATION
 - ▨ SYOSSET LANDFILL

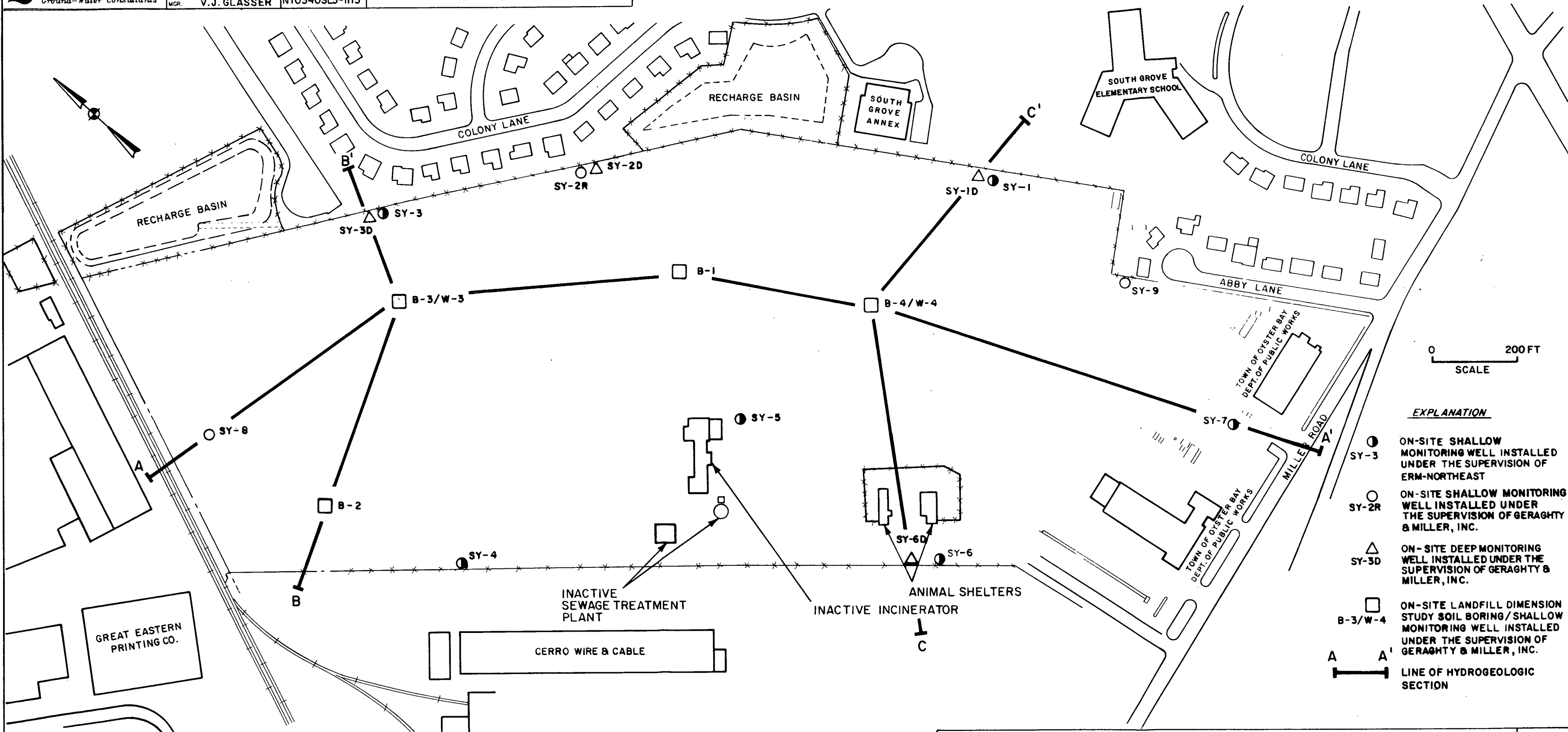
**LOCATIONS OF PUBLIC SUPPLY WELLS WITHIN
A 3-MILE RADIUS AND INDUSTRIAL WELLS WITHIN
A 1-MILE RADIUS OF THE SYOSSET LANDFILL,
SYOSSET, NEW YORK**



EXPLANATION

- SY-3 ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF ERM-NORTHEAST
- SY-2R ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- △ SY-3D ON-SITE DEEP MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- B-3/W-4 ON-SITE LANDFILL DIMENSION STUDY SOIL BORING/SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.

0 200 FT
SCALE



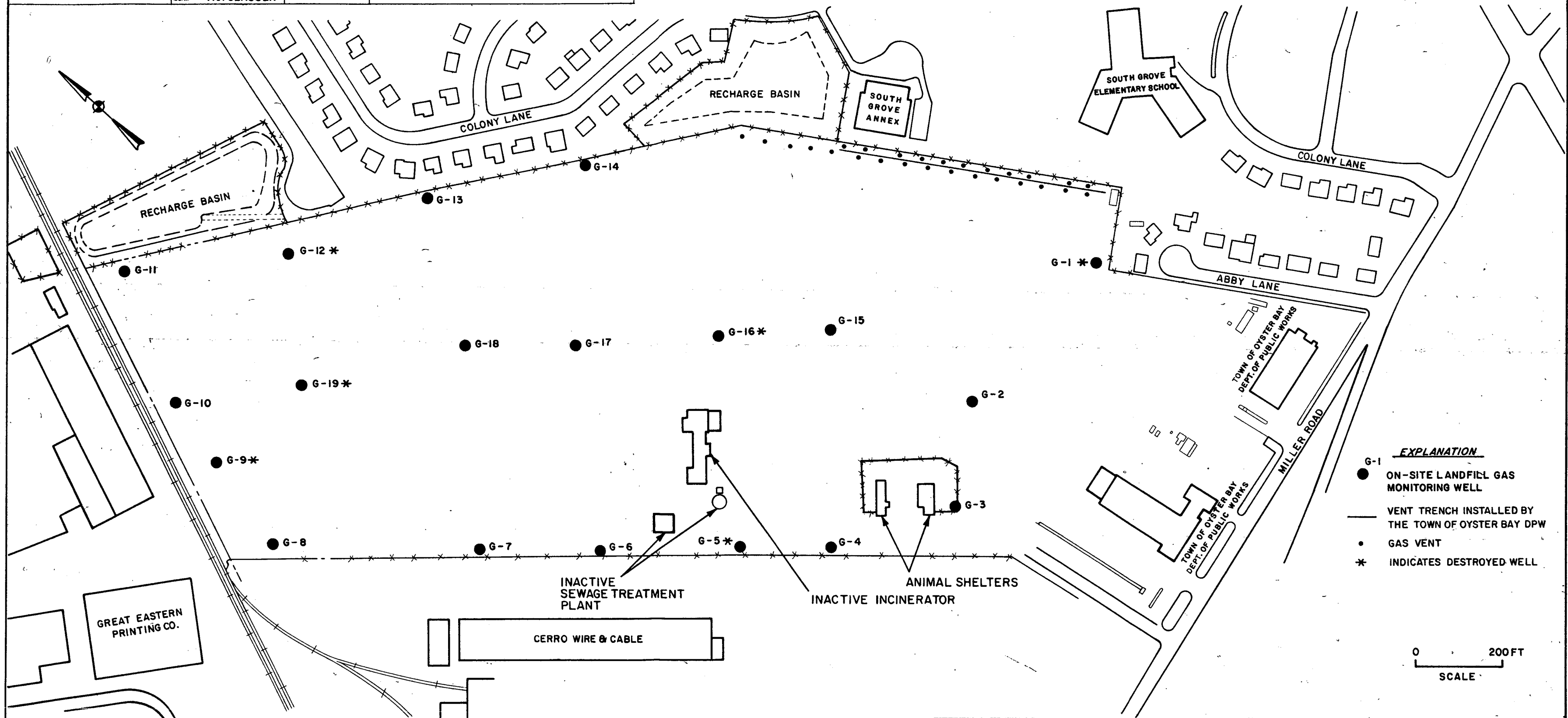
EXPLANATION

- SY-3 ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF ERM-NORTHEAST
- SY-2R ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- △ SY-3D ON-SITE DEEP MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- B-3/W-4 ON-SITE LANDFILL DIMENSION STUDY SOIL BORING / SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- A — A' LINE OF HYDROGEOLOGIC SECTION

SOURCE: LOCKWOOD, KESSLER & BARTLETT, INC.
SYOSSET, NEW YORK

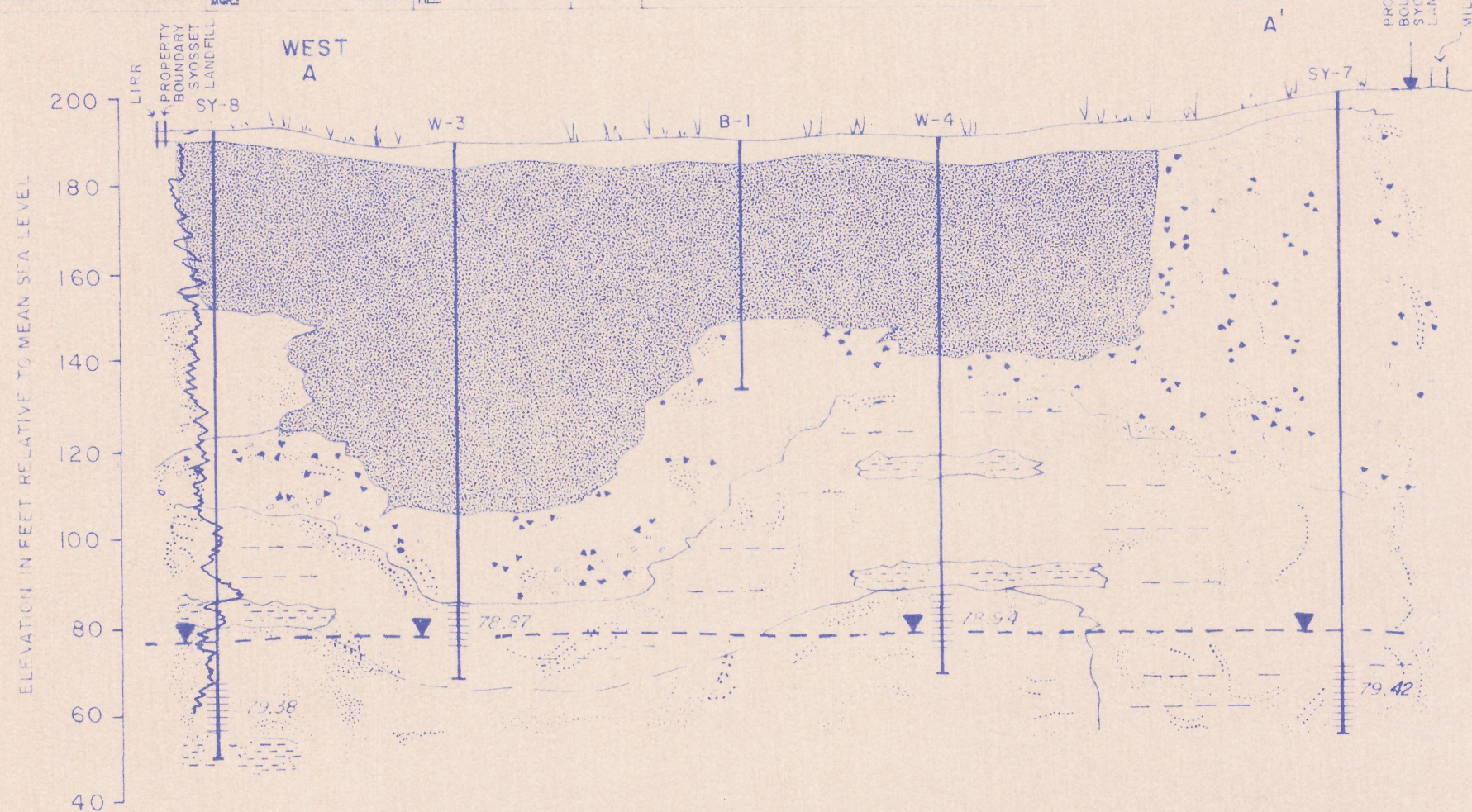
SUBJECT: LOCATIONS OF GROUND-WATER MONITORING WELLS, SOIL BORINGS, AND LINES OF HYDROGEOLOGIC SECTION, Syosset Landfill, Syosset, New York

FIGURE
3B



EAST
A'

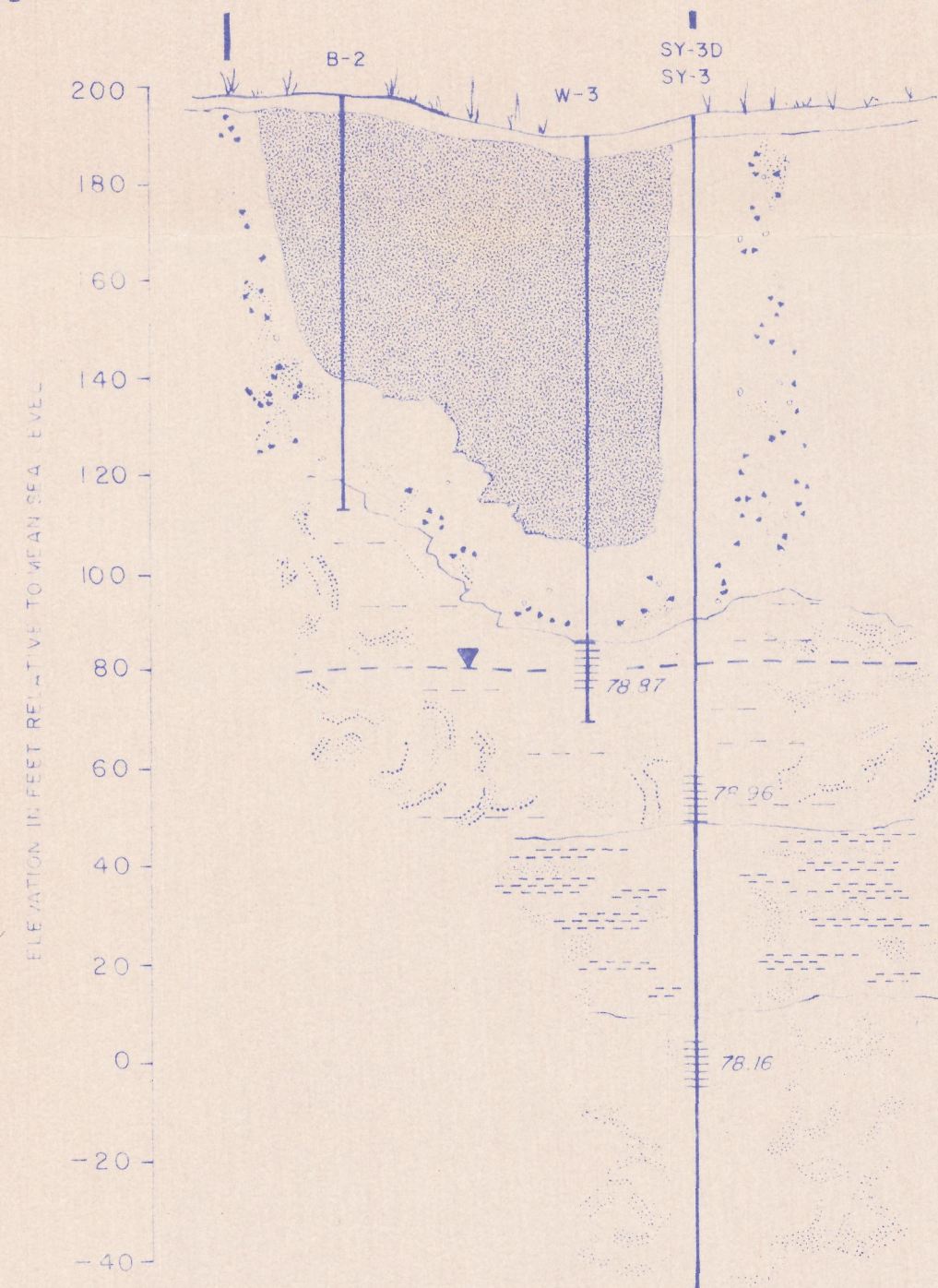
PROPERTY
BOUNDARY
SYOSSET
LANDFILL
MILLER RD.



SOUTH
B

PROPERTY
BOUNDARY
SYOSSET
LANDFILL

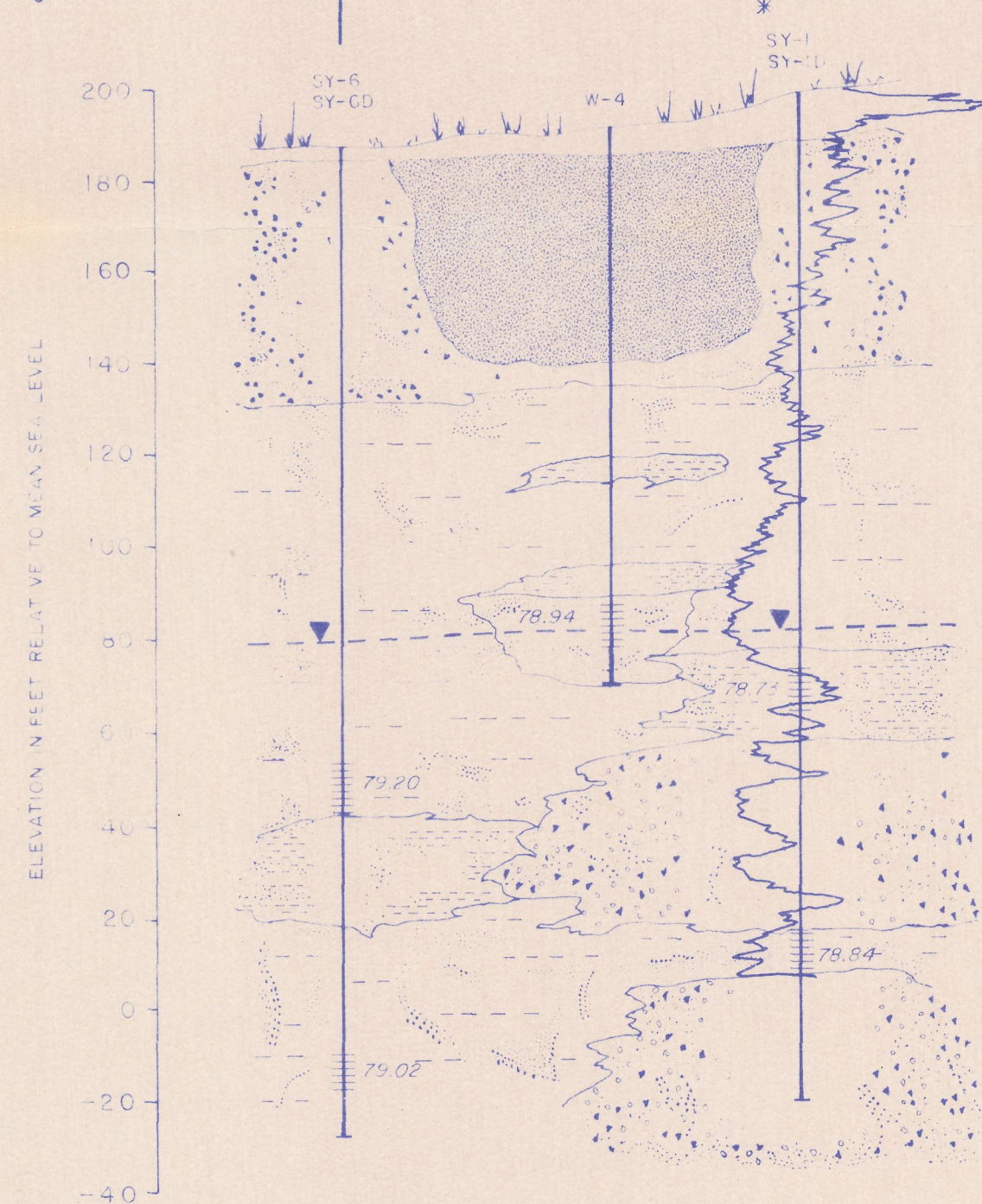
NORTH
B'



SOUTH
C

PROPERTY
BOUNDARY
SYOSSET
LANDFILL

NORTH
C'



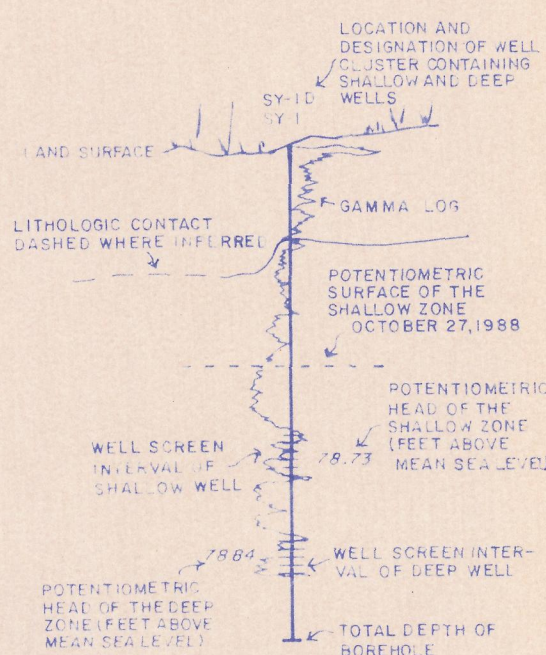
EXPLANATION

- CLEAN FILL
- LAND FILL
- SAND, COARSE TO FINE WITH GRAVEL (WITH OR WITHOUT SILT)
- SAND, MEDIUM TO VERY FINE WITH CLAY TRINGERS (WITH OR WITHOUT SILT)
- CLAY (WITH OR WITHOUT SAND AND/OR SILT)
- SAND, MEDIUM TO VERY FINE WITH SILT

VERTICAL EXAGGERATION = 10X

0 400 FT
HORIZONTAL SCALE

* GEOLOGIC LOGS FROM BOTH WELL BORINGS IN THE WELL CLUSTER WHERE TO ILLUSTRATE THE GEOLOGY.

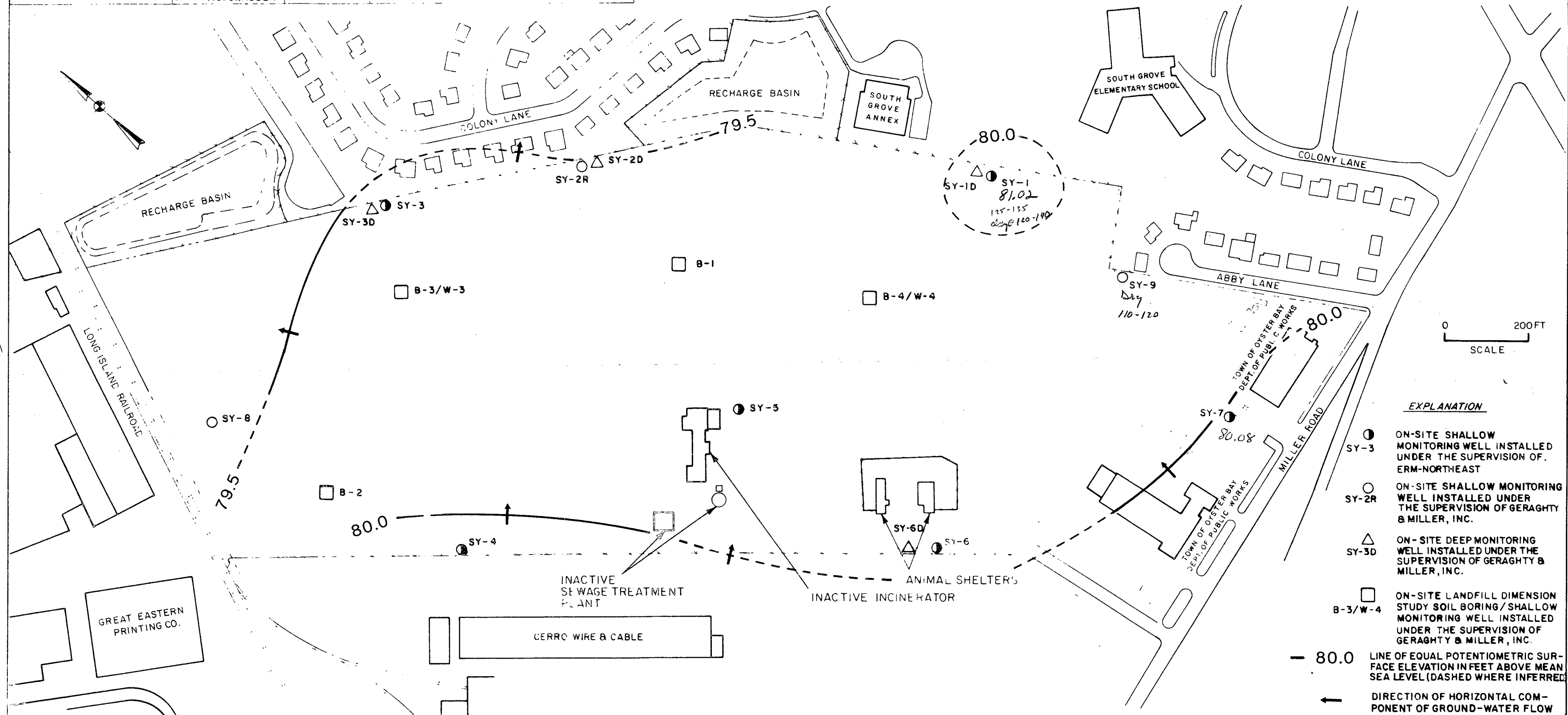


SUBJECT:

HYDROGEOLOGIC CROSS SECTIONS A-A', B-B', C-C'
Syosset Landfill, Syosset, New York

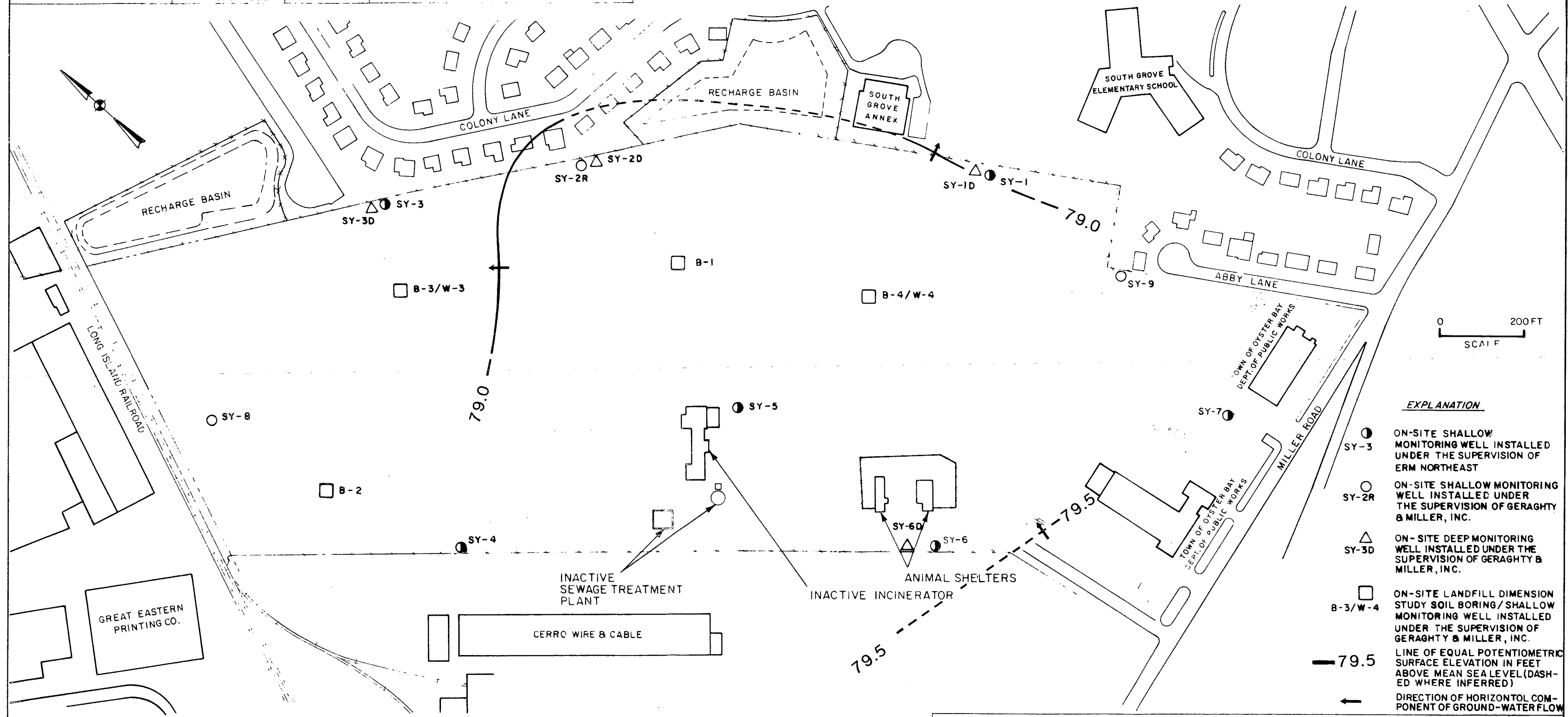
FIGURE

5



SOURCE: LOCKWOOD, KESSLER & BARTLETT, INC.
SYOSSET, NEW YORK

POTENTIOMETRIC SURFACE OF THE SHALLOW ZONE (5' TO 71 FT, msl) OF THE MAGOTHY AQUIFER ON AUGUST 18, 1989, Syosset Landfill, Syosset, N.Y.

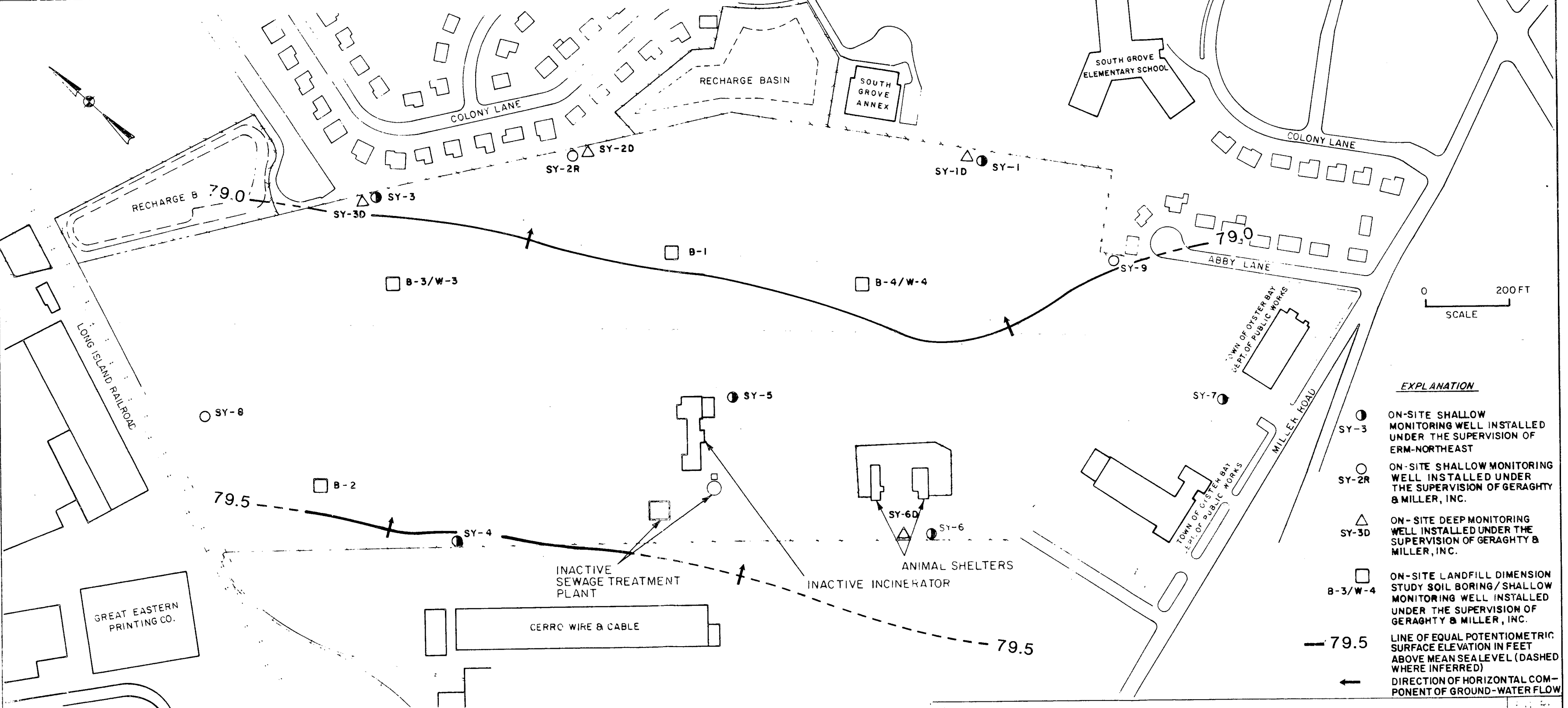


EXPLANATION

- SY-3 ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF ERM NORTHEAST
- SY-2R ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- △ SY-3D ON-SITE DEEP MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- B-3/W-4 ON-SITE LANDFILL DIMENSION STUDY SOIL BORING/SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- 79.5 LINE OF EQUAL POTENTIOMETRIC SURFACE ELEVATION IN FEET ABOVE MEAN SEA LEVEL (DASHED WHERE INFERRED)
- ← DIRECTION OF HORIZONTAL COMPONENT OF GROUND-WATER FLOW

SOURCE: LOCKWOOD, KESSLER & BARTLETT, INC
SYOSSET, NEW YORK

POTENTIOMETRIC SURFACE OF THE DEEP ZONE OF THE MAGOTHY
AQUIFER ON AUGUST 18, 1988, Syosset Landfill, Syosset, New York

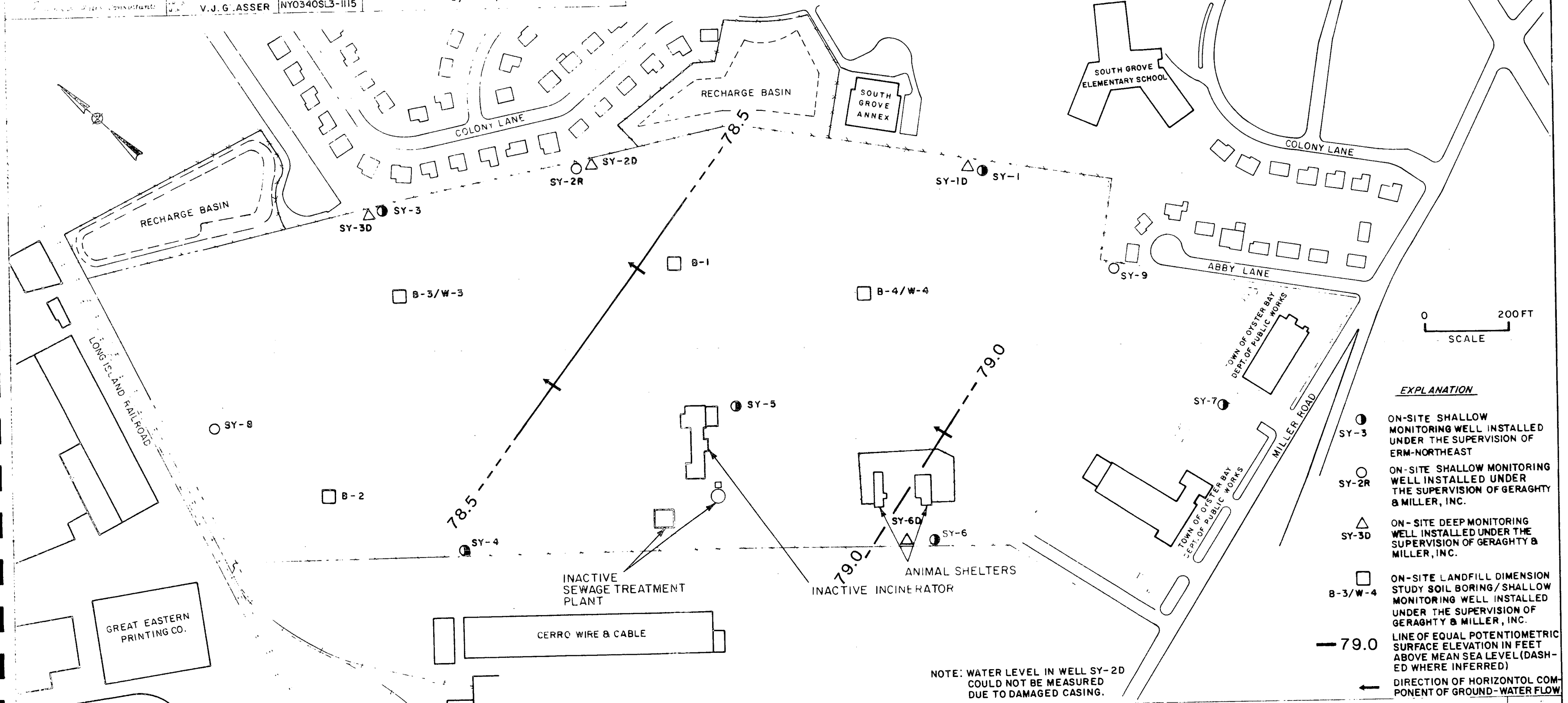


EXPLANATION

- SY-3 ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF ERM-NORTHEAST
- SY-2R ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- △ SY-30 ON-SITE DEEP MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- B-3/W-4 ON-SITE LANDFILL DIMENSION STUDY SOIL BORING/SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- 79.5 LINE OF EQUAL POTENTIOMETRIC SURFACE ELEVATION IN FEET ABOVE MEAN SEA LEVEL (DASHED WHERE INFERRED)
- ← DIRECTION OF HORIZONTAL COMPONENT OF GROUND-WATER FLOW

SOURCE: LOCKWOOD, KESSLER & BARTLETT, INC.
SYOSSET, NEW YORK

POTENTIOMETRIC SURFACE OF THE SHALLOW ZONE (51 TO 71 ft msl) OF THE MAGOTHY AQUIFER ON OCTOBER 27, 1988, Syosset Landfill, Syosset, New York



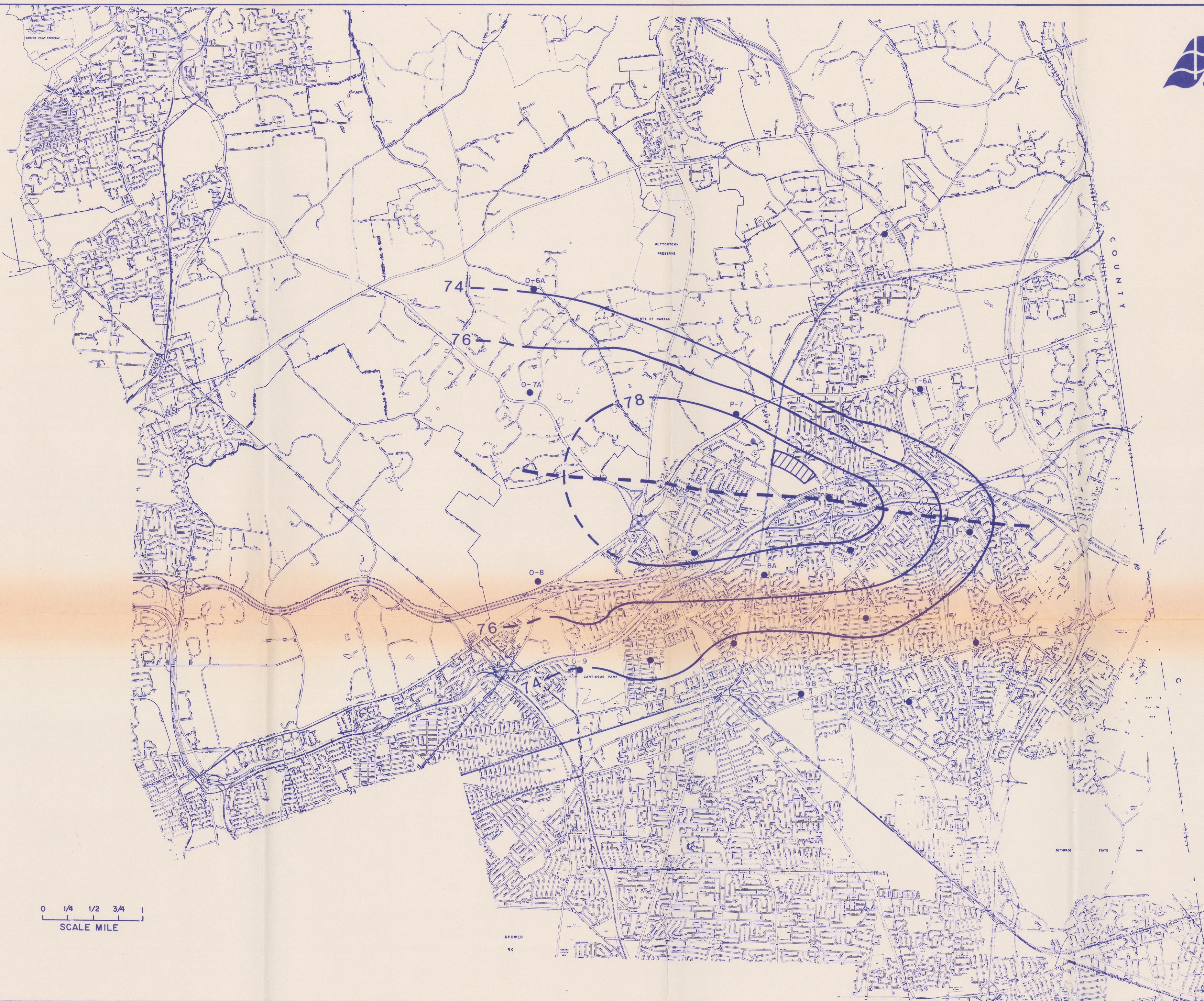
0 200 FT
SCALE

EXPLANATION

- SY-3 ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF ERM-NORTHEAST
- SY-2R ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- △ SY-3D ON-SITE DEEP MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- B-3/W-4 ON-SITE LANDFILL DIMENSION STUDY SOIL BORING/SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- 79.0 LINE OF EQUAL POTENTIOMETRIC SURFACE ELEVATION IN FEET ABOVE MEAN SEA LEVEL (DASHED WHERE INFERRED)
- DIRECTION OF HORIZONTAL COMPONENT OF GROUND-WATER FLOW

NOTE: WATER LEVEL IN WELL SY-2D COULD NOT BE MEASURED DUE TO DAMAGED CASING.

POTENTIOMETRIC SURFACE OF THE DEEP ZONE OF THE MAGOTHY AQUIFER ON OCTOBER 27, 1988, Syosset Landfill, Syosset, New York



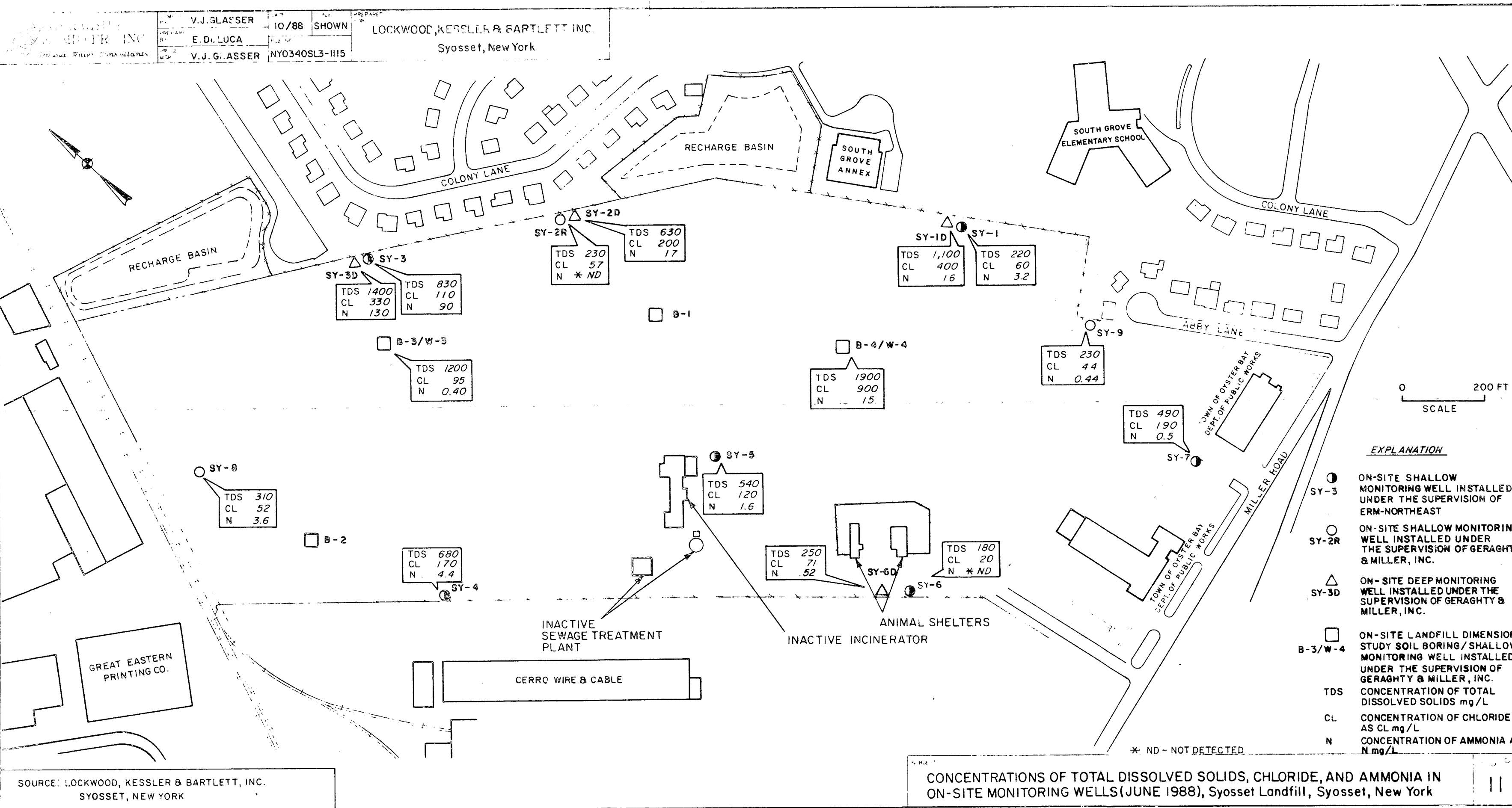
0 1/4 1/2 3/4 1
SCALE MILE

EXPLANATION

- T-8
76
74
72
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68
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64
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12
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-2
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-54
-56
-58
-60
-62
-64
-66
-68
-70
-72
-74
-76
-78
-80
-82
-84
-86
-88
-90
-92
-94
-96
-98
-100
- NASSAU COUNTY OBSERVATION WELL
— LINE OF EQUAL POTENTIOMETRIC SURFACE
ELEVATION, IN FEET ABOVE MEAN SEA LEVEL
(DASHED WHERE INFERRED)
--- APPROXIMATE LOCATION OF REGIONAL GROUND-WATER DIVIDE
▨ SYOSSET LANDFILL

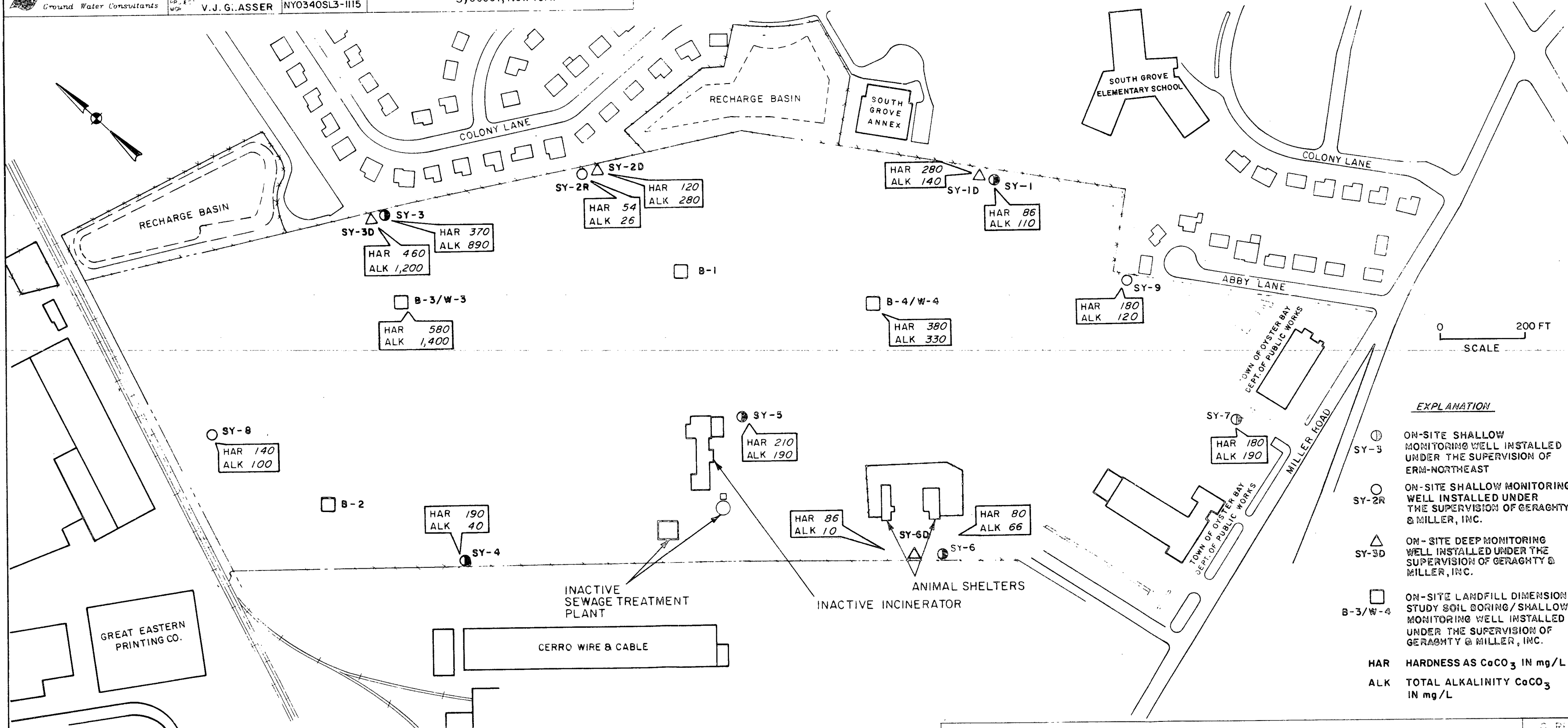
Direction of horizontal
component of groundwater
flow

REGIONAL POTENTIOMETRIC SURFACE OF THE
SHALLOW ZONE OF THE MAGOTHY AQUIFER,
IN THE VICINITY OF THE SYOSSET LANDFILL,
ON NOVEMBER 18, 1988
SYOSSET, NEW YORK



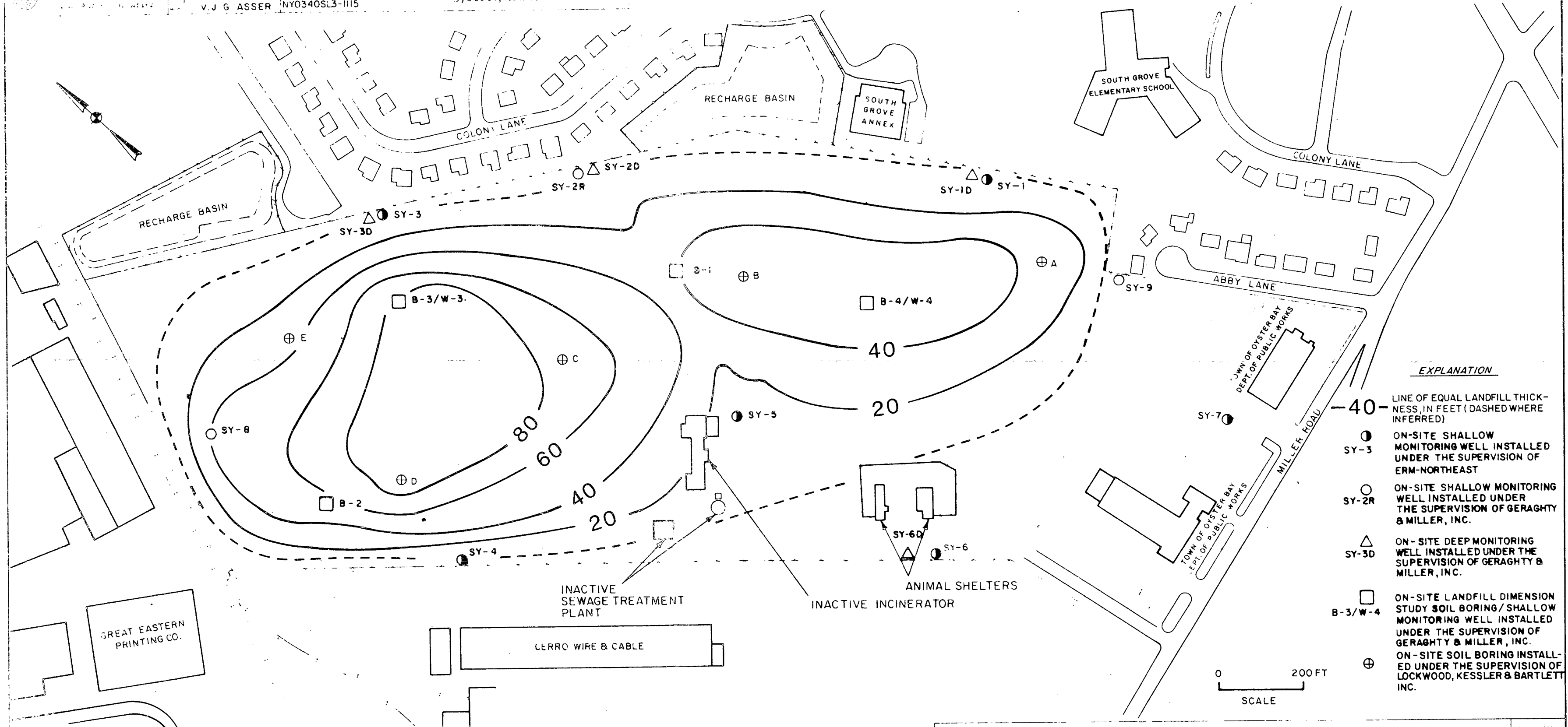
SOURCE: LOCKWOOD, KESSLER & BARTLETT, INC.
SYOSSET, NEW YORK

CONCENTRATIONS OF TOTAL DISSOLVED SOLIDS, CHLORIDE, AND AMMONIA IN
ON-SITE MONITORING WELLS (JUNE 1988), Syosset Landfill, Syosset, New York



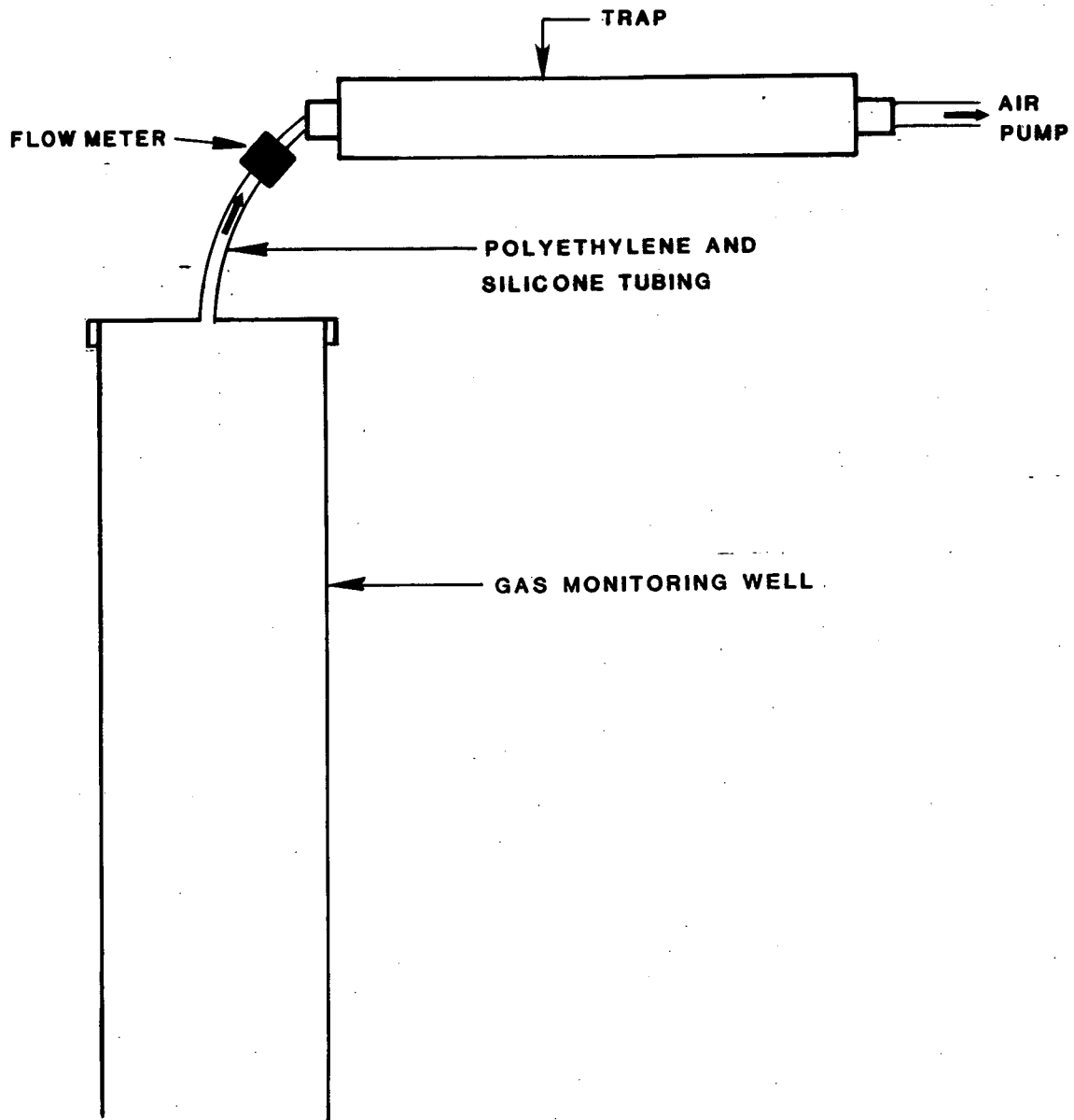
EXPLANATION

- SY-3 ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF ERM-NORTHEAST
- SY-2R ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- △ SY-3D ON-SITE DEEP MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- B-3/W-4 ON-SITE LANDFILL DIMENSION STUDY SOIL BORING/SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- HAR HARDNESS AS CaCO_3 IN mg/L
- ALK TOTAL ALKALINITY CaCO_3 IN mg/L



EXPLANATION

- LINE OF EQUAL LANDFILL THICKNESS, IN FEET (DASHED WHERE INFERRED)
- SY-3 ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF ERM-NORTHEAST
- SY-2R ON-SITE SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- △ SY-3D ON-SITE DEEP MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- B-3/W-4 ON-SITE LANDFILL DIMENSION STUDY SOIL BORING / SHALLOW MONITORING WELL INSTALLED UNDER THE SUPERVISION OF GERAGHTY & MILLER, INC.
- ⊕ ON-SITE SOIL BORING INSTALLED UNDER THE SUPERVISION OF LOCKWOOD, KESSLER & BARTLETT INC.



SUBJECT:

GAS MONITORING WELL SAMPLING APPARATUS, Syosset Landfill, Syosset, N.Y..

FIGURE

14

SAMPLE/CORE LOG

BORING/WELL: SY-1D PROJECT NO: NY0340SL03 PAGE: 1 of 2

SITE LOCATION: Syosset Landfill DRILLING STARTED: 12/28/87 DRILLING COMPLETED: 1/29/88

TOTAL DEPTH DRILLED: 200 FT HOLE DIAMETER: 8 IN. TYPE OF SAMPLE/CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 FT x 2 IN. SAMPLING INTERVAL: 10 FT

LAND-SURFACE ELEVATION: () SURVEYED
() ESTIMATED DATUM: _____

DRILLING FLUID USED: Aqua-Gel Bentonite DRILLING METHOD: Mud Rotary

DRILLING CONTRACTOR: Hydro Group, Inc. DRILLER: Pete/Carl HELPER: Neil/Rich

PREPARED BY: Dan St. Germain HAMMER WEIGHT: 140 LB HAMMER DROP: 30 inches

| SAMPLE DEPTH (FT BELOW LAND SURFACE) | | CORE RECVRY (FT) | BLOW COUNTS PER 6 INCHES | SAMPLE/CORE DESCRIPTION |
|--|-----|------------------------|-----------------------------------|--|
| FROM | TO | | | |
| 30 | 32 | | | Sand, coarse, little medium to fine gravel, yellow-brown, moist. |
| 60 | 62 | | | Sand, coarse, little medium to fine gravel, yellow-brown, moist. |
| 70 | 72 | | | Sand, coarse, little medium to fine gravel, yellow-brown, moist. |
| 80 | 82 | | | Sand, fine to medium, little silt, grey-brown, trace clay (white), moist. |
| 90 | 92 | | | Sand, fine to medium, little silt, grey-brown, trace clay (white), moist. |
| 100 | 102 | | | Sand, fine to medium, little silt, grey-brown, moist. |
| 110 | 112 | | | Sand, fine to medium, little silt, grey-brown, moist. |
| 120 | 122 | | | Clay, white, trace sand. |
| 130 | 132 | | | Clay, white, trace fine sand, iron stains. |
| 140 | 142 | | | Top 2 in. clay, white; Bottom 10 in. sand, fine, little fine gravel, trace silt, tan, wet. |
| 150 | 152 | | | Sand, fine to medium, little fine gravel, trace clay, tan, wet. |
| 160 | 162 | | | Sand, medium to coarse, and fine gravel, tan, wet. |
| 170 | 172 | | | Sand, medium to coarse, and fine gravel, tan, wet. |
| 180 | 182 | | | Top 6 in. clay, white; Bottom 6 in. sand, fine, and clay, tan. |
| 190 | 192 | | | Sand, medium to fine, and fine to medium gravel, tan, |

SAMPLE/CORE LOG (Cont.d)

BORING/WELL: SY-1D

PREPARED BY: Dan St. Germain

PAGE: 2 of 2

[illegible]

SAMPLE/CORE LOG

BORING/WELL: SY-2D PROJECT NO: NY0340SL03 PAGE: 1 of 2

SITE LOCATION: Syosset Landfill DRILLING STARTED: 2/4/88 DRILLING COMPLETED: 2/8/88

TOTAL DEPTH DRILLED: 213 FT HOLE DIAMETER: 10 IN. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 FT x 2 IN. SAMPLING INTERVAL: 10 Ft

LAND-SURFACE ELEVATION: () SURVEYED
() ESTIMATED DATUM: _____

DRILLING FLUID USED: Aqua Gel Bentonite DRILLING METHOD: Mud Rotary

DRILLING CONTRACTOR: Hydro Group, Inc. DRILLER: Ed/Carl HELPER: Lou/Rich

PREPARED BY: Dan St. Germain HAMMER WEIGHT: 140 LB HAMMER DROP: 30 inches

| SAMPLE DEPTH (FT BELOW LAND SURFACE) | | CORE RECVRY (FT) | BLOW COUNTS PER 6 INCHES | SAMPLE/CORE DESCRIPTION |
|--|-----|------------------------|-----------------------------------|---|
| FROM | TO | | | |
| 13 | 15 | | | Sand, fine to coarse, some fine to medium, gravel, tan, moist. |
| 23 | 25 | | | Sand, fine to coarse, some fine to medium gravel, tan, moist. |
| 33 | 35 | | | Sand, fine to coarse, little fine gravel, tan, moist. |
| 43 | 45 | | | Sand, fine to coarse, little fine gravel, tan, moist. |
| 53 | 55 | | | Sand, fine to coarse, little fine gravel, tan, moist. |
| 63 | 65 | | | Sand, fine, little fine gravel, little silt, micaceous, tan, moist. |
| 73 | 75 | | | Sand, fine, little gravel, little silt, micaceous, tan, moist. |
| 83 | 85 | | | Sand, fine, little black clay, grey. |
| 93 | 95 | | | Clay, black, dense, dry. |
| 103 | 105 | | | Sand, fine to medium, some silt, white, trace white clay, wet. |
| 113 | 115 | | | Sand, fine to medium, some silt, brown. |
| 123 | 125 | | | Sand, fine to medium, some silt, tan, micaceous, wet. |
| 133 | 135 | | | Sand, fine to medium, some silt, tan, micaceous, wet. |
| 143 | 145 | | | Sand, fine to medium, some silt, tan, micaceous, wet. |
| 153 | 155 | | | Sand, fine to medium, some silt, tan, micaceous, wet. |
| 163 | 165 | | | Sand, fine to medium, some silt, tan, micaceous, wet. |
| 173 | 175 | | | Sand, fine, and silt, tan, wet. |
| 183 | 185 | | | Sand, medium to coarse, little fine sand, brown, wet. |

SAMPLE/CORE LOG (Cont.d)

BORING/WELL: SY-2D

PREPARED BY: Dan St. Germain

PAGE: 2 of 2

[illegible]

SAMPLE/CORE LOG

BORING/WELL: SY-3D PROJECT NO: NY0340SL03 PAGE: 1 of 2

SITE LOCATION: Syosset Landfill DRILLING STARTED: 2/16/88 DRILLING COMPLETED: _____

TOTAL DEPTH DRILLED: 225 FT HOLE DIAMETER: 8 IN. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 FT x 2 IN. SAMPLING INTERVAL: 10 FT

LAND-SURFACE ELEVATION: _____ () SURVEYED () ESTIMATED DATUM: _____

DRILLING FLUID USED: Aqua Gel Bentonite DRILLING METHOD: Mud Rotary

DRILLING CONTRACTOR: Hydro Group, Inc. DRILLER: Carl/Ed HELPER: Rick/Lou

PREPARED BY: Dan St. Germain HAMMER WEIGHT: 140 LB HAMMER DROP: 30 inches

| SAMPLE DEPTH (FT BELOW LAND SURFACE) | | CORE RECVRY (FT) | BLOW COUNTS PER 6 INCHES | SAMPLE/CORE DESCRIPTION |
|--|-----|------------------------|-----------------------------------|---|
| FROM | TO | | | |
| 0 | 33 | | | *Sand, coarse to fine, little fine gravel, trace silt, tan. |
| 33 | 35 | | | Sand, coarse to fine, little fine gravel, trace silt, tan, dry. |
| 43 | 45 | | | *Sand, medium to fine, some coarse sand, little fine gravel. |
| 53 | 55 | | | Sand, coarse to medium, some fine gravel, little fine sand, tan, dry. |
| 63 | 65 | | | Sand, fine to medium, little coarse sand, tan, dry. |
| 73 | 75 | | | Sand, coarse to fine, some fine gravel, tan, dry. |
| 83 | 85 | | | Sand, fine to very fine, little medium sand, little silt, moist, tan. |
| 93 | 95 | | | Sand, coarse to fine, some fine gravel, trace silt, brown, moist. |
| 103 | 105 | | | Sand, fine to medium, some silt, brown, moist. |
| 113 | 115 | | | Sand, fine to medium, some silt, tan, wet. |
| 123 | 125 | | | Sand, fine to medium, some silt, tan, wet. |
| 133 | 135 | | | Clay, white, sandy, dense, dry. |
| 143 | 145 | | | Clay, white, sandy, dense, dry. |
| 153 | 155 | | | Clay, white/grey, sandy, dense, dry. |
| 163 | 165 | | | Clay, white/grey, dense, dry. |
| 173 | 175 | | | Clay, grey, dense, dry. |
| 183 | 185 | | | Silty clay, trace very fine sand, wet. |

SAMPLE/CORE LOG (Cont.d)

BORING/WELL: SY-3D PREPARED BY: Dan St. Germain PAGE: 2 of 2

[illegible]

SAMPLE/CORE LOG

BORING/WELL: SY-6D PROJECT NO: NY0340SL03 PAGE: 1 of 2

SITE LOCATION: Syosset Landfill DRILLING STARTED: 3/2/88 DRILLING COMPLETED: 3/7/88

TOTAL DEPTH DRILLED: 215 FT HOLE DIAMETER: 8 IN. TYPE OF SAMPLE/CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 FT x 2 IN. SAMPLING INTERVAL: 10 FT

LAND-SURFACE ELEVATION: () SURVEYED
() ESTIMATED DATUM: _____

DRILLING FLUID USED: 100% Bentonite (Aqua Gel) DRILLING METHOD: Mud Rotary

DRILLING CONTRACTOR: Hydro Group, Inc. DRILLER: Eddie/Carl HELPER: Lou/Rich

PREPARED BY: Dan St. Germain HAMMER WEIGHT: 140 LB HAMMER DROP: 30 inches

| SAMPLE DEPTH (FT BELOW LAND SURFACE) | | CORE RECVRY (FT) | BLOW COUNTS PER 6 INCHES | SAMPLE/CORE DESCRIPTION |
|--|-----|------------------------|-----------------------------------|---|
| FROM | TO | | | |
| 13 | 15 | | | Sand, coarse; some fine gravel; little coarse gravel; tan, dry. |
| 23 | 25 | | | Sand, coarse; some fine gravel; little coarse gravel; tan, dry. |
| 33 | 35 | | | Sand, coarse; some fine gravel; little coarse gravel; tan, dry. |
| 43 | 45 | | | Sand, coarse; some fine gravel; little fine to medium sand; tan, dry. |
| 53 | 55 | | | Sand, coarse; some fine gravel; little coarse gravel; tan, dry. |
| 63 | 65 | | | Sand, medium to fine; little silt; trace clay; tan, dry. |
| 73 | 75 | | | Sand, fine to very fine; some silt; tan-orangish tan, dry. |
| 83 | 85 | | | Sand, medium to fine; trace silt and fine gravel; tan to white, dry. |
| 93 | 95 | | | Sand, medium to fine; trace silt; tan, dry. |
| 103 | 105 | | | Sand, medium to fine; white. |
| 113 | 115 | | | Sand, medium to fine; trace boulder; white. |
| 123 | 125 | | | Sand, medium, dense; grey-white, and silt, tan. |
| 133 | 135 | | | Sand, medium to fine; grey-white, wet. |
| 143 | 145 | | | Sand, medium to fine; grey-white; little silt; red, wet, black clay at approximately 148 ft. |

SAMPLE/CORE LOG (Cont.d)

BORING/WELL: SY-6D

PREPARED BY: Dan St. Germain

PAGE: 2 of 2

[illegible]

SAMPLE/CORE LOG

| | | | | | |
|--|--|---|--|--|--|
| BORING/WELL: SY-8 | | PROJECT NO: NY0340SL03 | | PAGE: 1 of 1 | |
| SITE LOCATION: Syosset Landfill | | DRILLING STARTED: 12/2/87 | | DRILLING COMPLETED: 12/17/87 | |
| TOTAL DEPTH DRILLED: 143 FT | | HOLE DIAMETER: 12 IN./ 8 IN. | | TYPE OF SAMPLE/ CORING DEVICE: Split Spoon | |
| LENGTH & DIAMETER OF CORING DEVICE: 2 FT x 2 IN. | | SAMPLING INTERVAL: 10 FT | | | |
| LAND-SURFACE ELEVATION: | | { } SURVEYED | | { } ESTIMATED DATUM: | |
| DRILLING FLUID USED: Bentonite (Aqua Gel) | | DRILLING METHOD: Hollow-Stem Auger for 90 Mud Rotary for 50 FT | | | |
| DRILLING CONTRACTOR: Hydro Group, Inc. | | DRILLER: Pete | | HELPER: Neil | |
| PREPARED BY: Dan St. Germain | | HAMMER WEIGHT: 130 LB | | HAMMER DROP: 30 inches | |

[illegible]

SAMPLE/CORE LOG

BORING/WELL: SY-9 PROJECT NO: NY0340SL03 PAGE: 1 of 1

SITE LOCATION: Syosset Landfill DRILLING STARTED: 1/20/88 DRILLING COMPLETED: 1/20/88

TOTAL DEPTH DRILLED: 140 FT HOLE DIAMETER: 8 IN. TYPE OF SAMPLE/CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 FT x 2 IN. SAMPLING INTERVAL: 10 FT

LAND-SURFACE ELEVATION: () SURVEYED
() ESTIMATED DATUM:

DRILLING FLUID USED: Aqua-Gel Bentonite DRILLING METHOD: Mud Rotary

DRILLING CONTRACTOR: Hydro Group, Inc. DRILLER: Ed/Carl HELPER: Lou/Rich

PREPARED BY: Dan St. Germain HAMMER WEIGHT: 140 LB. HAMMER DROP: 30 inches

| SAMPLE DEPTH (FT BELOW LAND SURFACE) | | CORE RECVRY (FT) | BLOW COUNTS PER 6 INCHES | SAMPLE/CORE DESCRIPTION |
|--|-----|------------------------|-----------------------------------|---|
| FROM | TO | | | |
| 10 | 12 | | | Sand, coarse to fine, some fine gravel, tan, dry. |
| 20 | 22 | | | Sand, coarse to fine, some fine gravel, tan, dry. |
| 30 | 32 | | | Sand, coarse to fine, some fine gravel, tan, dry. |
| 40 | 42 | | | Sand, coarse to fine, some fine gravel, tan, dry. |
| 50 | 52 | | | Sand, coarse to fine, some fine to medium gravel, tan, dry. |
| 60 | 62 | | | Sand, coarse to fine, some fine gravel, tan with iron stains, dry. |
| 70 | 72 | | | Sand, coarse to fine, some fine gravel, tan, trace clay, red, dry. |
| 80 | 82 | | | Sand, fine to medium, little white clay, tan, moist, dry. |
| 90 | 92 | | | Sand, fine, little white clay, grey, moist. |
| 100 | 102 | | | Sand, medium to fine, white, wet. |
| 110 | 112 | | | Sand, medium to fine, white, wet. |
| 120 | 122 | | | Sand, fine to medium, some white clay, white, wet. |
| 130 | 132 | | | Clay, grey, dense, dry. |
| 140 | 142 | | | Clay, tan, little fine sand, tan, dense, dry. |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

SAMPLE/CORE LOG

BORING/WELL: B-1 PROJECT NO: NY0340SL03 PAGE: 1 of 1

SITE LOCATION: Syosset Landfill DRILLING STARTED: 10/29/87 DRILLING COMPLETED: 10/30/87

TOTAL DEPTH DRILLED: 55 FT HOLE DIAMETER: 8 IN. TYPE OF SAMPLE/CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 FT x 2 IN SAMPLING INTERVAL: 5 FT

LAND-SURFACE ELEVATION: () SURVEYED
() ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow-Stem Auger

DRILLING CONTRACTOR: Hydro Group, Inc. DRILLER: Pete HELPER: Neil

PREPARED BY: Dan St. Germain HAMMER WEIGHT: 140 LB HAMMER DROP: 30 inches

| SAMPLE DEPTH (FT BELOW LAND SURFACE) | | CORE RECVRY (FT) | BLOW COUNTS PER 6 INCHES | SAMPLE/CORE DESCRIPTION |
|--|----|------------------------|-----------------------------------|---|
| FROM | TO | | | |
| 4 | 6 | | | Asphalt, sand, fine to coarse, some fine gravel, moist, dark brown. |
| 9 | 11 | | | Asphalt, sand, fine to coarse, some fine gravel, moist, dark brown. |
| 14 | 16 | | | Asphalt, wood, sand, fine to coarse, some fine gravel, moist, dark brown. |
| 19 | 21 | | | Asphalt, wood, sand, fine to coarse, some fine gravel, moist, drak brown. |
| 24 | 26 | | | Wood, sand, fine to coarse, some fine gravel, aluminum, glass, dark brown. |
| 29 | 31 | | | Wood, sand, fine to coarse, some fine gravel, aluminum, glass, dark brown. |
| 34 | 36 | | | Plastic, sand, fine to coarse, trace coarse gravel, dark brown. |
| 39 | 41 | | | Gravel, fine, glass, wood, plastic, sand, fine to coarse, dark brown. |
| 44 | 46 | | | Sand, coarse, some fine gravel, some medium sand, yellow. |
| 54 | 56 | | | Sand, coarse, some fine gravel, some medium sand, yellow. |
| | | | | |
| | | | | |
| | | | | |

SAMPLE/CORE LOG

BORING/WELL: B-2 PROJECT NO: NY0340SL03 PAGE: 1 of 1

SITE LOCATION: Syosset Landfill DRILLING STARTED: 11/3/87 DRILLING COMPLETED: 11/4/87

TOTAL DEPTH DRILLED: 85 FT HOLE DIAMETER: 8 IN. TYPE OF SAMPLE/CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 FT x 2 IN. SAMPLING INTERVAL: 5 FT

LAND-SURFACE ELEVATION: () SURVEYED
() ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow-Stem Auger

DRILLING CONTRACTOR: Hydro Group, Inc. DRILLER: Pete HELPER: Neil

PREPARED BY: Dan St. Germain HAMMER WEIGHT: 140 LB HAMMER DROP: 30 inches

| SAMPLE DEPTH (FT BELOW LAND SURFACE) | | CORE RECVRY (FT) | BLOW COUNTS PER 6 INCHES | SAMPLE/CORE DESCRIPTION |
|--|----|------------------------|-----------------------------------|--|
| FROM | TO | | | |
| 4 | 6 | | | Sand, coarse, some fine to medium sand, some fine gravel, dark brown, trace plastic. |
| 9 | 11 | | | Rubber, asphalt, sand, coarse to fine, dark brown. |
| 14 | 16 | | | Rubber, sand, coarse to fine, dark brown. |
| 19 | 21 | | | Rubber, sand, coarse to fine, dark brown. |
| 24 | 26 | | | Rubber, wood, sand, coarse to fine, dark brown. |
| 29 | 31 | | | Rubber, wood, sand, coarse to fine, dark brown. |
| 34 | 36 | | | Rubber, sand, coarse to fine, dark brown. |
| 39 | 41 | | | Gravel, fine, sand, coarse to fine, dark brown. |
| 44 | 46 | | | Gravel, fine, sand, coarse to fine, dark brown. |
| 49 | 51 | | | Gravel, fine, sand, coarse to fine, dark brown, plastic. |
| 54 | 56 | | | Gravel, fine, sand, coarse to fine, dark brown, plastic. |
| 59 | 61 | | | Gravel, fine, sand, coarse to fine, dark brown. |
| 64 | 66 | | | Sand, coarse to fine, yellow-brown, with streaks of black. |
| 69 | 70 | | | Sand, coarse to fine, yellow-brown, with straks of black. |
| 74 | 76 | | | Sand, coarse to fine, yellow-brown, with streaks of black. |
| 79 | 81 | | | Sand, medium to fine, yellow-brown, clay streaks: brown, red-brown, yellow-brown. |
| 84 | 86 | | | Sand, medium to fine, yellow-brown, clay streaks: brown, red-brown, yellow-brown. |

SAMPLE/CORE LOG

BORING/WELL: B-3 PROJECT NO: NY0340SL03 PAGE: 1 of 2

SITE LOCATION: Syosset Landfill DRILLING STARTED: 11/6/87 DRILLING COMPLETED: 11/9/87

TOTAL DEPTH DRILLED: 120 FT HOLE DIAMETER: 8 IN. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 FT x 2 IN. SAMPLING INTERVAL: 5 FT

LAND-SURFACE ELEVATION: () SURVEYED
() ESTIMATED DATUM: _____

DRILLING FLUID USED: None DRILLING METHOD: Hollow-Stem Auger

DRILLING CONTRACTOR: Hydro Group, Inc. DRILLER: Pete HELPER: Neil

PREPARED BY: Dan St. Germain HAMMER WEIGHT: 140 LB HAMMER DROP: 30 inches

| SAMPLE DEPTH (FT BELOW LAND SURFACE) | | CORE RECVRY (FT) | BLOW COUNTS PER 6 INCHES | SAMPLE/CORE DESCRIPTION |
|--|----|------------------------|-----------------------------------|--|
| FROM | TO | | | |
| 4 | 6 | | | Wood, rubber, sand, coarse to fine, dark brown, moist. |
| 9 | 11 | | | Wood, rubber, sand, coarse to fine, dark brown, moist. |
| 14 | 16 | | | Rubber, wood, sand, coarse to fine, dark brown, moist. |
| 19 | 21 | | | Rubber, wood, plastic, aluminum, sand, coarse to fine, dark brown, moist. |
| 24 | 26 | | | Rubber, wood, sand, coarse to fine, dark brown, moist. |
| 29 | 31 | | | Rubber, wood, sand, coarse to fine, dark brown, moist. |
| 34 | 36 | | | Rubber, wood, sand, coarse to fine, dark brown, moist. |
| 39 | 41 | | | Rubber, wood, sand, coarse to fine, dark brown, moist. |
| 44 | 46 | | | Rubber, wood, sand, coarse to fine, dark brown, moist. |
| 49 | 51 | | | Rubber, sand, coarse to fine, dark brown, moist. |
| 54 | 56 | | | Rubber, sand, coarse to fine, dark brown, moist. |
| 59 | 61 | | | Rubber, wood, sand, coarse to fine, dark brown, moist. |
| 64 | 66 | | | Paper/wood pulp, rubber, wood, sand, coarse to fine, dark brown. |
| 69 | 71 | | | Paper/wood pulp, rubber, wood, sand, coarse to fine, dark brown. |
| 74 | 76 | | | Rubber, wood, sand, coarse to fine, dark brown, moist. |
| 79 | 81 | | | Rubber, wood, sand, coarse to fine, dark brown, moist. |
| 84 | 86 | | | Sand, coarse to fine, some fine gravel, yellow-brown, moist. |
| 89 | 91 | | | Sand, coarse to fine, some fine gravel, yellow-brown, moist. |

SAMPLE/CORE LOG (Cont.d)

BORING/WELL: B-3

PREPARED BY: Dan St. Germain

PAGE: 2 of 2

[illegible]

SAMPLE/CORE LOG

BORING/WELL: B-4 PROJECT NO: NY0340SL03 PAGE: 1 of 2

SITE LOCATION: Syosset Landfill DRILLING STARTED: 11/16/87 DRILLING COMPLETED: 11/17/87

TOTAL DEPTH DRILLED: 120 FT HOLE DIAMETER: 8 IN. TYPE OF SAMPLE/ CORING DEVICE: Split Spoon

LENGTH & DIAMETER OF CORING DEVICE: 2 FT x 2 IN. SAMPLING INTERVAL: 5 FT

LAND-SURFACE ELEVATION: () SURVEYED
() ESTIMATED DATUM:

DRILLING FLUID USED: None DRILLING METHOD: Hollow-Stem Auger

DRILLING CONTRACTOR: Hydro Group, Inc. DRILLER: Pete HELPER: Neil

PREPARED BY: Dan St. Germain HAMMER WEIGHT: 140 LB HAMMER DROP: 30 inches

| SAMPLE DEPTH (FT BELOW LAND SURFACE) | | CORE RECVRY (FT) | BLOW COUNTS PER 6 INCHES | SAMPLE/CORE DESCRIPTION |
|--|----|------------------------|-----------------------------------|---|
| FROM | TO | | | |
| 4 | 6 | | | Sand, coarse to fine, little fine gravel, brown, dry. |
| 9 | 11 | | | Clay, orange, moist, wood. |
| 14 | 16 | | | Sand, coarse to fine, some gravel, dark brown, moist. |
| 19 | 21 | | | Wood, plastic, rubber, sand, coarse to fine, dark brown, moist. |
| 24 | 26 | | | Wood, sand, coarse to fine, dark brown, moist. |
| 29 | 31 | | | Wood, plastic, sand, coarse to fine, dark brown, moist. |
| 34 | 36 | | | Sand, coarse to fine, trace fine gravel, dark brown, moist. |
| 39 | 41 | | | Sand, coarse to fine, trace fine gravel, dark brown, moist. |
| 44 | 46 | | | Wood, sand, coarse to fine, dark brown, moist. |
| 49 | 51 | | | Wood, sand, coarse to fine, dark brown, moist. |
| 54 | 56 | | | Sand, coarse to fine, dark brown, little fine gravel. |
| 59 | 61 | | | Sand, fine, some silt, yellow, white, little clay, dense, moist, natural material. |
| 64 | 66 | | | Sand, fine to very fine, white/yellow clay layers, moist. |
| 69 | 71 | | | Sand, fine to very fine, yellow/white clay layers, moist. |
| 74 | 76 | | | Clay white, with layers of sand, fine to very fine, moist, white. |
| 79 | 81 | | | Sand, fine to very fine, white & yellow, with layers |

SAMPLE/CORE LOG (Cont.d)

BORING/WELL: B-4

PREPARED BY: Dan St. Germain

PAGE: 2 of 2

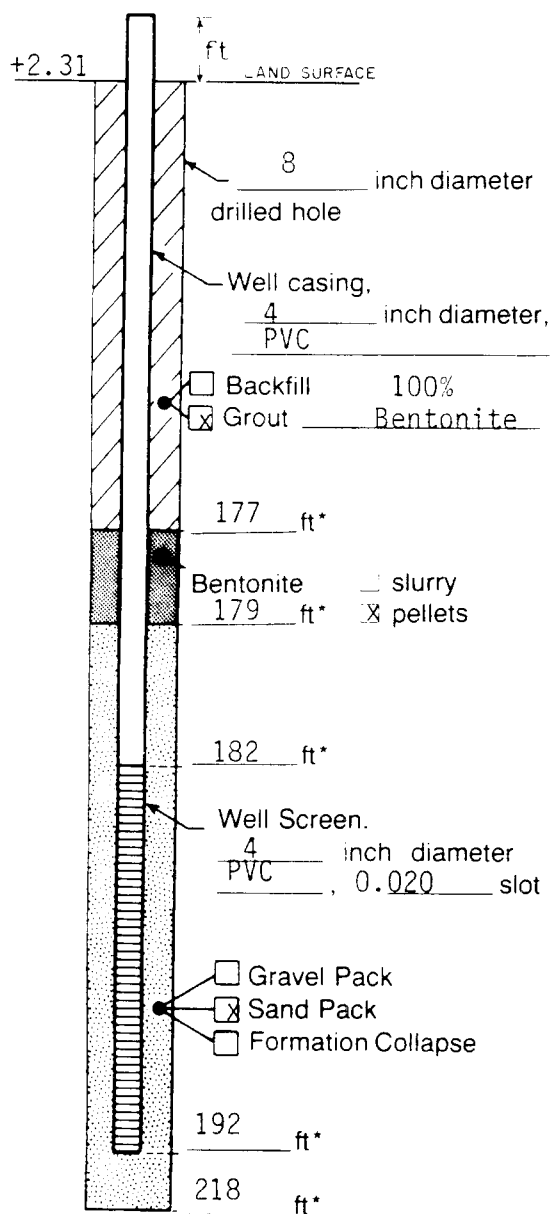
[illegible]





WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

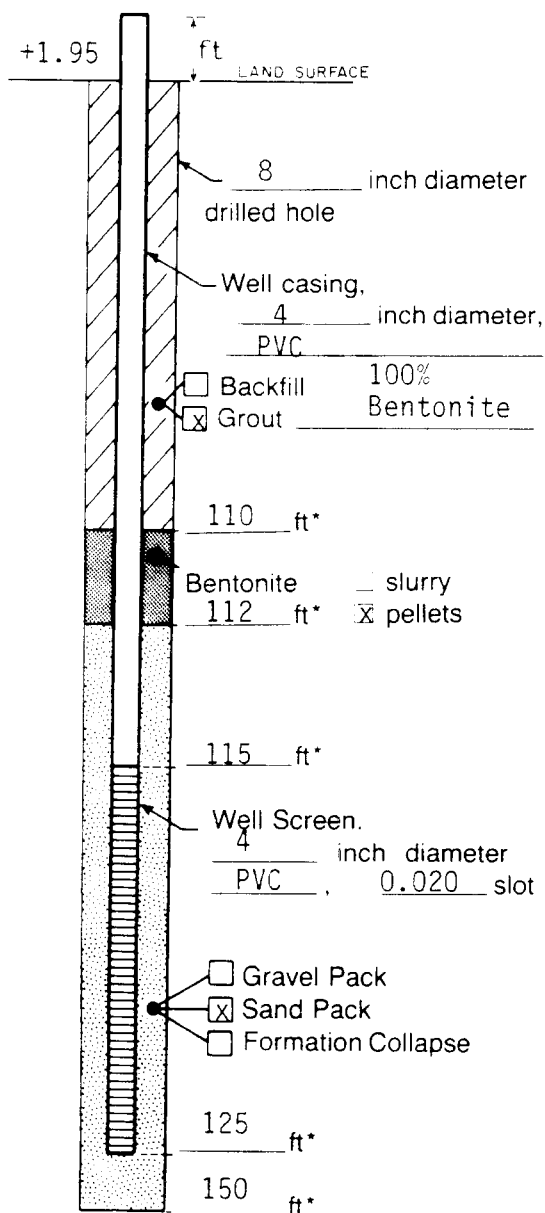
Project Syosset Landfill Well SY-1D
 Town/City Oyster Bay
 County Nassau State New York
 Permit No. _____
 Land-Surface Elevation _____ feet
 and Datum _____ feet ☐ Surveyed ☐ Estimated
 Installation Date(s) 2/2/88
 Drilling Method Mud Rotary
 Drilling Contractor Hydro Group, Inc.
 Drilling Fluid 100% Bentonite
 Development Technique(s) and Date(s)
Submersible Pump
 Fluid Loss During Drilling 5000 gallons
 Water Removed During Development 7500 gallons
 Static Depth to Water 110 feet below M.P.
 Pumping Depth to Water _____ feet below M.P.
 Pumping Duration 15.75 hours
 Yield 8 gpm Date 2/3/88
 Specific Capacity _____ gpm/ft
 Well Purpose Ground-Water Monitoring

Remarks _____

Prepared by Dan St. Germain

WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

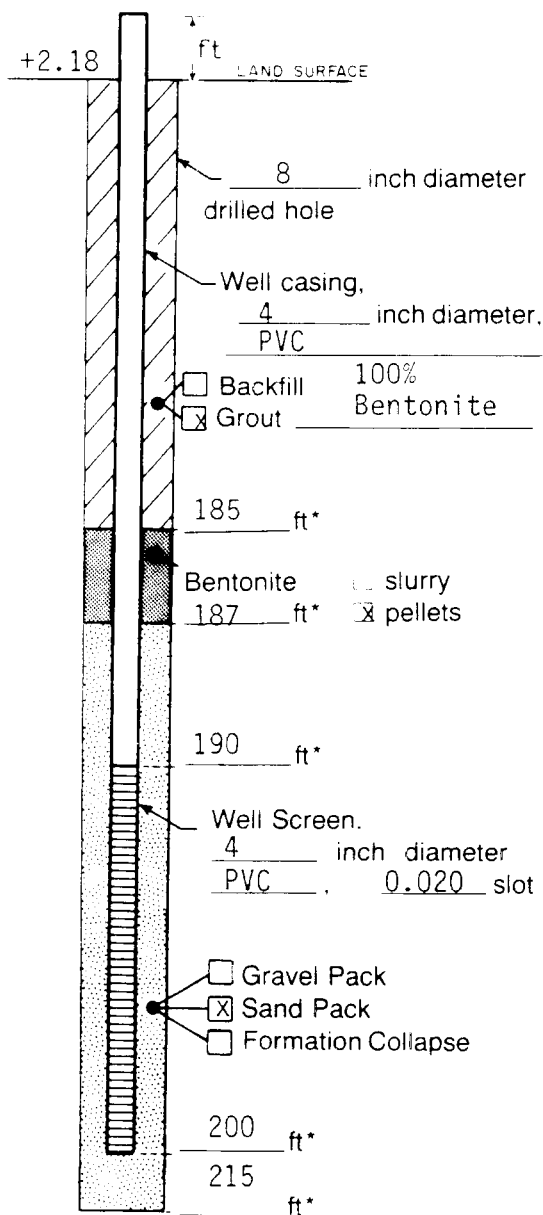
Project Syosset Landfill Well SY-2R
 Town/City Oyster Bay
 County Nassau State New York
 Permit No. _____
 Land-Surface Elevation _____ feet ☐ Surveyed ☐ Estimated
 Installation Date(s) 2/11/88 - 2/12/88
 Drilling Method Mud Rotary
 Drilling Contractor Hydro Group, Inc.
 Drilling Fluid 100% Bentonite
 Development Technique(s) and Date(s)
Submersible Pump
Surge Block
Back Flush
 Fluid Loss During Drilling 700 gallons
 Water Removed During Development 950 gallons
 Static Depth to Water 106 feet below M.P.
 Pumping Depth to Water _____ feet below M.P.
 Pumping Duration 10.5 hours
 Yield 1 1/2 gpm Date 2/16/88
 Specific Capacity _____ gpm/ft
 Well Purpose Ground-Water Monitoring

Remarks _____

Prepared by Dan St. Germain

WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

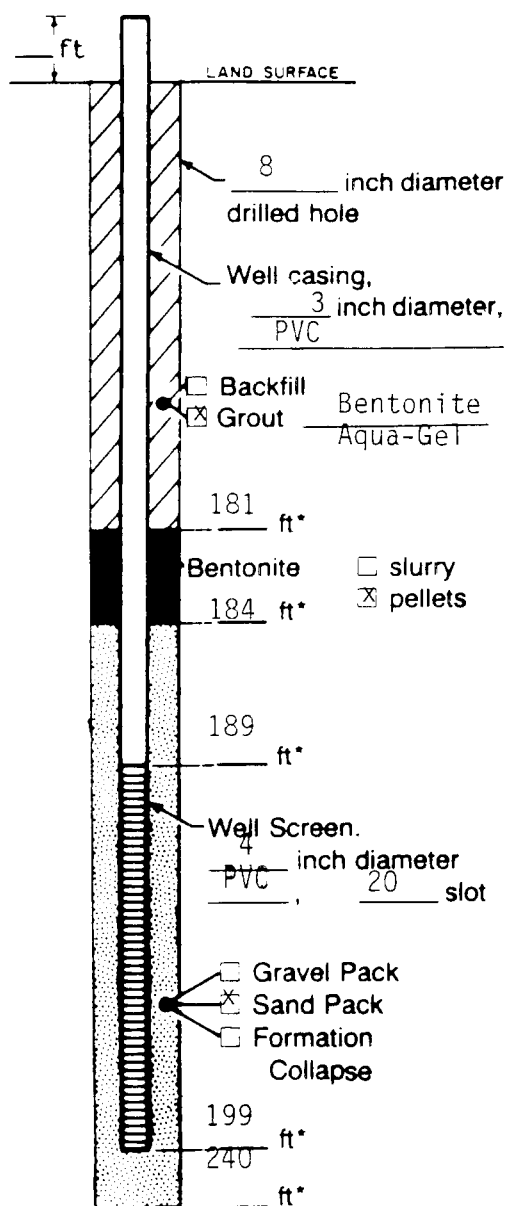
Project Syosset Landfill Well SY-2D
 Town/City Oyster Bay
 County Nassau State New York
 Permit No. _____
 Land-Surface Elevation _____ feet ☐ Surveyed ☐ Estimated
 Installation Date(s) 2/9/88
 Drilling Method Mud Rotary
 Drilling Contractor Hydro Group, Inc.
 Drilling Fluid 100% Bentonite
 Development Technique(s) and Date(s)
Submersible Pump
 Fluid Loss During Drilling 2000 gallons
 Water Removed During Development 3000 gallons
 Static Depth to Water 106 feet below M.P.
 Pumping Depth to Water _____ feet below M.P.
 Pumping Duration 6.25 hours
 Yield 8 gpm Date 2/16/88
 Specific Capacity _____ gpm/ft
 Well Purpose Ground-Water Monitoring

Remarks _____

Prepared by Dan St. Germain

WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is Top of Well Casing Unless Otherwise Noted.

* Depth Below
Land Surface

Project Syosset Landfill Well SY-3D

Project: Oyster Bay

County Nassau County State New York

Permit No. _____

Land-Surface Elevation

and Datum _____ feet ☐ surveyed

☐ estimated

Installation Dates(s) 2/25/88

Drilling Method Mud Rotary

Drilling Contractor Hydro Group

Drilling Fluid Bentonite

Development Techniques(s) and Date(s)

Submersible Pump

Fluid Loss During Drilling 2,000 gallons

Water Removed During Development 3,500 gallons

Static Depth to Water _____ feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration 3 hours

Yield 2 gpm Date 2/26/88

Date 2/26/88

Specific Capacity _____ gpm/ft

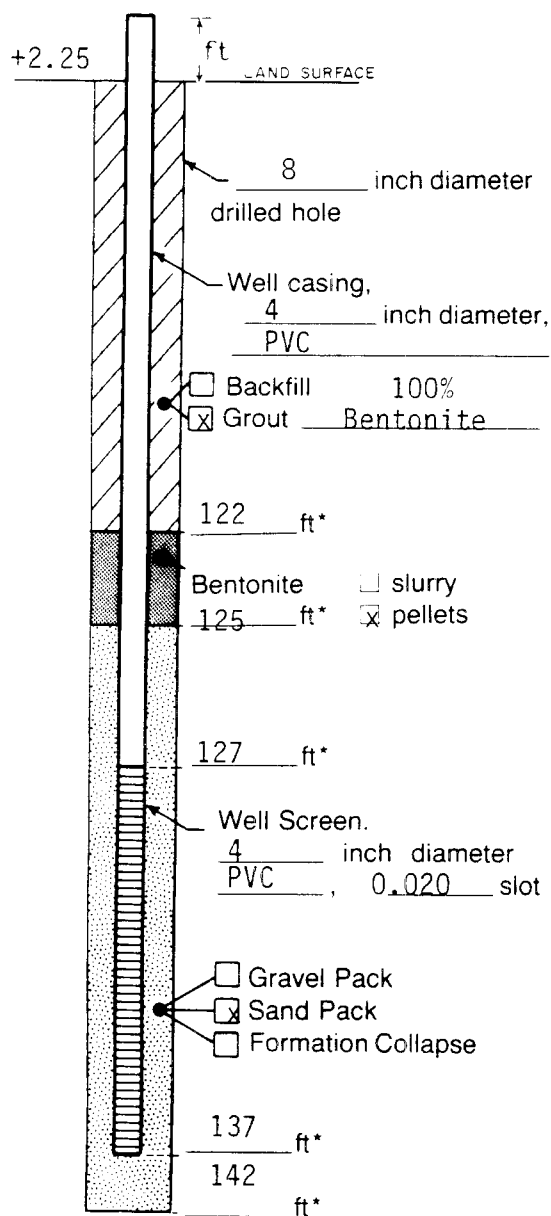
Well Purpose _____

Remarks _____

Prepared by Dan St. Germain

WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project Syosset Landfill Well SY-8
Town/City Oyster Bay
County Nassau State New York
Permit No. _____
Land-Surface Elevation _____ feet ☐ Surveyed ☐ Estimated
Installation Date(s) 12/19/87
Drilling Method Mud Rotary
Drilling Contractor Hydro Group, Inc.
Drilling Fluid 100% Bentonite

Development Technique(s) and Date(s)
Submersible Pump

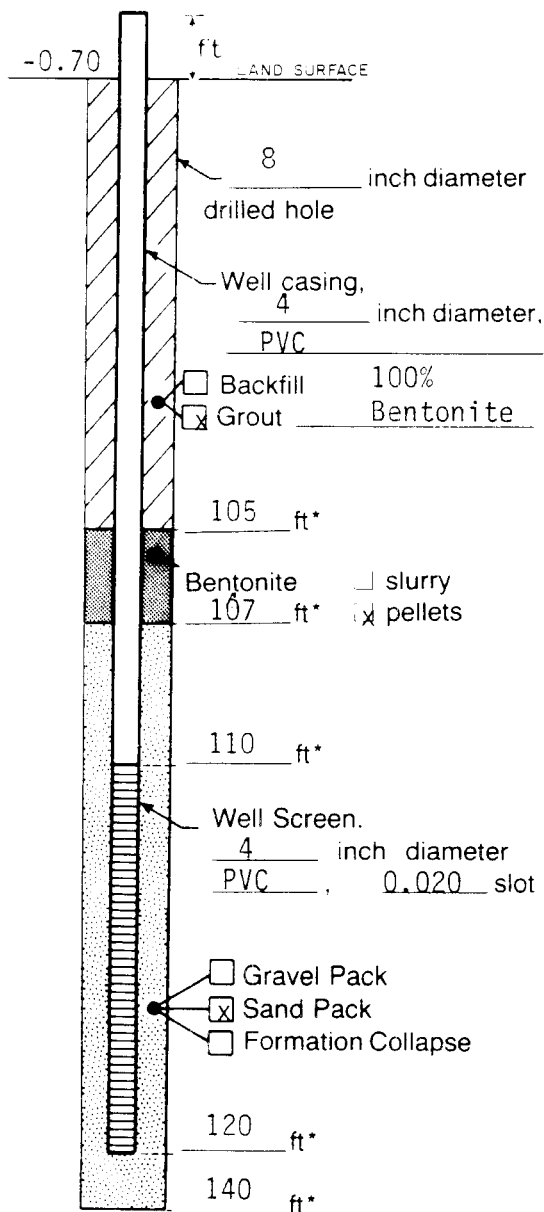
Fluid Loss During Drilling 1500 gallons
Water Removed During Development 2400 gallons
Static Depth to Water 105 feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration 5 hours
Yield 8 gpm Date 12/24/87
Specific Capacity _____ gpm/ft
Well Purpose Ground-Water Monitoring

Remarks _____

Prepared by Dan St. Germain

WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project Syosset Landfill Well SY-9
Town/City Cyster Bay
County Nassau State New York
Permit No. _____
Land-Surface Elevation _____
and Datum _____ feet ☐ Surveyed ☐ Estimated
Installation Date(s) 1/29/88
Drilling Method Mud Rotary
Drilling Contractor Hydro Group, Inc.
Drilling Fluid 100% Bentonite

Development Technique(s) and Date(s)
Bailed

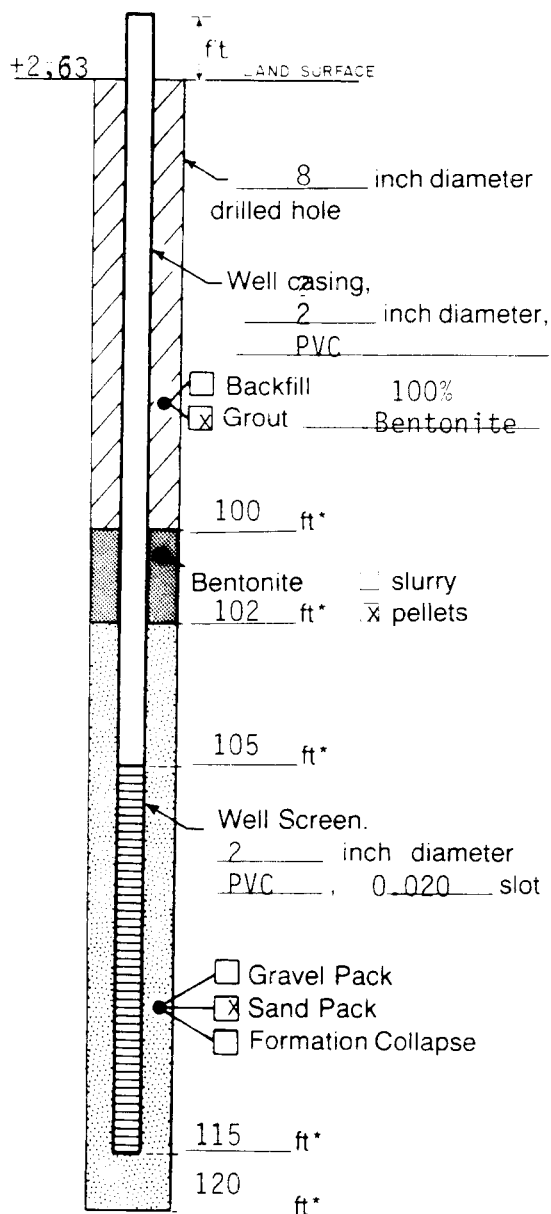
Fluid Loss During Drilling 1000 gallons
Water Removed During Development 25 gallons
Static Depth to Water 118 feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose Ground-Water Monitoring

Remarks Only 25 gallons of water were removed during the development of this well because of the limited yield of the well due to the screen setting (just above a clay lens) and water column in the well (approximately 2 ft).

Prepared by Dan St. Germain

WELL CONSTRUCTION LOG

(UNCONSOLIDATED)



Measuring Point is
Top of Well Casing
Unless Otherwise Noted.

*Depth Below Land Surface

Project Syosset Landfill Well W-3
Town/City Oyster Bay
County Nassau State New York
Permit No. _____
Land-Surface Elevation _____
and Datum _____ feet ☐ Surveyed
☐ Estimated
Installation Date(s) 11-10-87
Drilling Method Hollow-Stem Augers
Drilling Contractor Hydro Group, Inc.
Drilling Fluid None

Development Technique(s) and Date(s)
Bailed

Fluid Loss During Drilling None gallons
Water Removed During Development 100 gallons
Static Depth to Water 110.5 feet below M.P.
Pumping Depth to Water _____ feet below M.P.
Pumping Duration _____ hours
Yield _____ gpm Date _____
Specific Capacity _____ gpm/ft
Well Purpose Ground-Water Monitoring

Remarks _____

Prepared by Dan St. Germain

APPENDIX D

SELECTED ENVIRONMENTAL PROTECTION AGENCY PRIORITY POLLUTANTS

| <u>Base-Neutral Extractable Organics</u> | <u>Volatile Organics</u> | <u>Metals</u> |
|--|----------------------------------|---------------|
| Acenaphthene | Benzene | Antimony |
| Acenaphthylene | Bromoform | Arsenic |
| Anthracene | Carbon tetrachloride | Beryllium |
| Benzidine | Chlorobenzene | Cadmium |
| Benzo(a)anthracene | Chlorodibromomethane | Chromium |
| Benzo(a)pyrene | Chloroethane | Copper |
| 3-4-Benzofluoranthene | 2-Chloroethyl vinyl ether | Lead |
| Benzo(ghi)perylene | Dichlorobromomethane | Mercury |
| Benzo(k)fluoranthene | Dichlorodifluoromethane | Nickel |
| bis(2-Chloroethoxy) methane | 1,1-Dichloroethane | Selenium |
| bis(2-Chloroethyl) ether | 1,2-Dichloroethane | Silver |
| bis(2-Chlorisopropyl) ether | 1,1-Dichloroethylene | Thallium |
| bis(2-Ethylhexyl) phthalate | 1,2-Dichloropropane | Zinc |
| 4-Bromophenyl phenyl ether | 1,3-Dichloropropylene | |
| Butyl benzyl phthalate | Ethylbenzene | |
| 2-Chloronaphthalene | Methyl bromide | <u>PCBs</u> |
| 4-Chlorophenyl phenyl ether | Methyl chloride | |
| Chrysene | Methylene chloride | PCB-1242 |
| Dibenzo(a,h)anthracene | 1,1,2,2-Tetrachloroethane | PCB-1254 |
| 1,2-Dichlorobenzene | Tetrachloroethylene | PCB-1221 |
| 1,3-Dichlorobenzene | Toluene | PCB-1232 |
| 1,4-Dichlorobenzene | 1,2-trans-Dichloroethylene | PCB-1248 |
| 3,3'-Dichlorobenzidine | 1,1,1-Trichloroethane | PCB-1260 |
| Diethyl phthalate | 1,1,2-Trichloroethane | PCB-1016 |
| Dimethyl phthalate | Trichloroethylene | |
| Di-n-butyl phthalate | Trichlorofluoromethane | |
| 2,4-dinitrotoluene | Vinyl chloride | |
| 2,6-dinitrotoluene | | |
| Di-n-octyl phthalate | | |
| 1,2-diphenylhydrazine | <u>Acid Extractable Organics</u> | |
| Fluoranthene | 2-chlorophenol | |
| Fluorene | 2,4-Dichlorophenol | |
| Hexachlorobenzene | 2,4-Dimethylphenol | |
| Hexachlorobutadiene | 4,6-Dinitro-o-cresol | |
| Hexachlorocyclopentadiene | 2,4-Dinitrophenol | |
| Hexachloroethane | 2-Nitrophenol | |
| Indeno(1,2,3-c,d)pyrene | 4-Nitrophenol | |
| Isophorone | p-Chloro-m-cresol | |
| Naphthalene | Pentachlorophenol | |
| Nitrobenzene | Phenol | |
| N-Nitrosodimethylamine | 2,4,6-Trichlorophenol | |
| N-Nitrosodi-n-propylamine | | |
| N-Nitrosodiphenylamine | | |
| Phenanthrene | | |
| Pyrene | | |
| 1,2,4-Trichlorobenzene | | |

Additional Parameters

Total Cyanides
Total Dissolved Solids
Specific Conductance
pH
Chloride
Nitrate
Ammonia
Hardness
Bicarbonate
Carbonate
Sulfate
Sodium
Potassium
Barium
Iron



APPENDIX E

(Gas Sampling Protocol)

The sampling devise used to collect air (gas) samples from the 10 gas monitoring wells sampled in July 1987 and August/September 1988 consisted of a laboratory trap which was connected to each gas well using fittings and tubing composed of inert materials (silicon, polyethylene, brass, and Teflon™). A small electric vacuum pump was used to withdraw air samples from each well, and a flow meter consisting of inert materials was used to monitor the flow rate.

First Round Sampling (July 1987)

Before evacuation/sampling took place in July 1987 zero air was pumped through the sampling devise (laboratory trap not inserted) for one minute to prevent cross contamination. Next, the system was connected to the gas well and three casing volumes of air were purged. Following purging, one of the laboratory traps were connected to the sampling devise between the flow meter and vacuum pump. The length of time required to collect the samples (250 ml and 1,000 ml) was calculated by dividing the sample volume by the flow rate. The flow rate is determined by observing the flow meter reading and referring to a chart for the flow rate converted to milliliter per minute (ml/min). After the first sample was collected, the second air sample was collected following the same procedure.

Second round Sampling (August/September 1988)

The only difference in sampling protocol between the July 1987 and August/September 1988 sampling rounds was that in August/September 1988, zero air was not pumped through the sampling device (tubing, flow meter, etc.) prior to purging, and five well volumes of air were purged from each well (prior to sampling) in 1988 compared to three well volumes purged in 1987.